

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 2332.—VOL. L.

LONDON, SATURDAY, MAY 1, 1880.

WITH SUPPLEMENT. PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value.

Every Friday a general and reliable List issued (a copy of which will be forwarded regularly on application), containing closing prices of the week.

MINES INSPECTED.
BANKERS: CITY BANK, LONDON—SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—
10 Almada, 11s. 59 Javall, 6s. 20 Ruby, £9 5s.
25 Carnarvon Cop., 22s 6d. 50 Killifretch, 15s. 20 Richmond, £1 6s.
10 Devon Consols, £13 3s. 20 Leadhills, £3 4s. 10 Roman Gravels, £11 3s.
20 East Crebor, 16s. 3d. 25 Marke Valley, £1 17 6s. 25 S. Indian Gold, £2 3 9s.
25 East Cadron, £3 11 3s. 20 Nouveau Monde, £2 1 2s. 15 Santa Barbara, £2 1 2s.
50 E. Roman Grav., 16s 6d. 30 N. Penstruthal, £1 10s. 10 So. Condurrow, £1 10s.
East Van, £3 18s. 9d. 20 N. D'Ershy, 20s. 20 South Darren, £3 1 2s.
25 Flagstaff, £2 5s. 20 N. Herodfoot, 11s. 6d. 25 S. E. Wynnaid, £2 2 6s.
50 Frontino, £4 5s. 25 Pandora, £1. 50 S. Penstruthal, 10s.
30 Glenrock, £1 17s. 6d. 10 Port Nigel, £2 7s. 6d. 10 Tankerville, £4 17s 6d.
25 Glenroy, 23s. 9d. 20 Port Phillip, 10s. 6d. 20 U. Van & Glyn, 13s 9d.
20 Grogwinion, £3. 50 Prince of Wales, 16s. 6d. 50 West Phoenix, £2 1 2s.
20 Herodfoot, £3 17s. 6d. 50 Parys Copper, £1 9s. 10 Wheal Phoenix, £2 1 2s.
25 Hindston Down, 25s. 200 Pestarena, 6s.

RAILWAYS—SPECIAL BUSINESS.

FOREIGN BONDS—SPECIAL BUSINESS.

Fortnightly accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES
and MISCELLANEOUS SHARES of every description.

RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS.

TRAMWAYS, TELEGRAPHHS, and all the LEADING INVESTMENTS.

Accounts opened for the Fortnightly Settlement

A List of Investments free on application.

MRS. BUMPUS has SPECIAL BUSINESS in the undermentioned:—
50 Almada, 12s. 3d. 10 East Van, £2 1 2s. 100 Nouveau Monde, £2 1 2s.
70 Aberllyn, 22s. 30 East Lovell, 40 No. Herodfoot, 11s. 6d.
50 Altarni. 20 East Chiverton, 100 Pen-yr-Osedd.
100 Bodiddra. 60 Flagstaff, £2 3 4s. 50 Panuelillo, £4 3s.
30 Blue Tent, £2. 25 Frontino, £4 3s. 9d. 75 Port Phillip, 11s.
150 Chontales, 3s. 6d. 15 Frongoch, £5 1 2s. 20 Penhalls.
50 Chapel House. 20 Grogwinion, £2 3 4s. 50 Parys Copper, 28s.
50 Cape Copper, £39 1 2s. 10 Great Laxey, £19. 30 Polrose.
40 Carnarvon, 21s. 6d. 50 Great Holway, 150 Pestarena.
2 Carn Brea. 100 Glenroy, 24s. 6d. 50 Prince of Wales.
10 Copiago, £10 1 2s. 15 Herodfoot, £3 19 5s. 50 Port Nigel.
50 Consolidated, 17s. 6d. 50 Hington, 22s. 10 Richmond, £1 6s.
25 Colorado, £2 1 2s. 100 Indian Glenrock, 38s. 15 Roman Gravels, £11 3s.
70 Devon Cons., £13 3s. 40 Javall, 6s. 3d. 20 Ruby, £9 5s.
50 Dor Pedro, 18s. 6d. 20 Killifretch, 15s. 6d. 25 S. Indian Gold, £2 1 2s.
3 Dolcoath. 25 Leadhills, £3 1 2s. 10 South Indian, £2 1 2s.
20 East Cadron, £3 1 2s. 10 Mellancea, £5 1 2s. 15 Wheal Grenville, £9 1 2s.
15 Elberhardt, £4 8s. 9d. 40 Marks Valley, 43s. 9d. 20 Wheal Sisters, £3 1 2s.
25 New Quebrada, £4 1 2s. 50 New Peevor, 19s. 75 Wheal Jewell, 19s.
SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending Investors and others.

The following Mines are particularly recommended:—

WHEAL GREENVILLE, WHEAL PEEVOR, WEST PEEVOR,
NEW PEEVOR, WHEAL SISTERS, WEST PHENIX,
PEN-YR-OSSED, DERWENT, SOUTH DARREN.

WILLIAM HENRY BUMPUS, SWORN BROKER.
OFFICES: 44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

MRS. J. ROSEWARNE, 3, COPTHALL BUILDINGS,
LONDON, E.C.

Is now on a tour of inspection through Devon and Cornwall, and will be pleased to give reliable information to his clients and others upon his return early next week. Special business in—

Bedford United. Gawton. Richmond.
Colorado. Gunnislake (Clitters). Ruby.
Devon Consols. Hington Down. South Darren.
East Cadron. New Bronfloyd. West Devon Consols.
East Crebor. Nouveau Monde. Wheal Crebor.
Flagstaff. Prince of Wales. Wheal Pevor.

FERDINAND R. KIRK, 5, BIRCHIN LANE,
LONDON, E.C.

FORTNIGHTLY ACCOUNTS opened, on receipt of the usual "cover," in Railways Home and Foreign, Mining Shares, Foreign Bonds, and certain Miscellaneous Securities.

"THE WEEK"—A SEPARATE EDITION from that which appears in the Mining Journal is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

MRS. E. J. BARTLETT, BRITISH AND FOREIGN STOCK AND SHARE DEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C.
PEN-YR-OSSED, GREAT HOLWAY, and WEST HOLWAY shares should have a great rise—rich courses of ore proved.

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29, BISHOPSGATE-STREET, LONDON, E.C.
Business transacted in every description of Stocks and Shares. Fortnightly accounts opened on receipt of usual cover.

BWLCH UNITED.—The dressing-floors will shortly be ready to prepare for market the large quantity of ore now at surface, from which a good dividend is secured.

BANKERS: ALLIANCE BANK (Limited).

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED 1861.
BANKERS: LONDON AND WESTMINSTER, Lothbury; and BARCLAY, BEYAN, and CO., Lombard-street, E.C.

Messrs. ENDEAN and Co. strongly advise the purchase of well selected Lead Mines at present low prices:—Van, Great Laxey, Roman Gravels, Llanrwst, and Tamar, also South Wheal Crebor (Copper). The next great rise will be in Lead Shares, and many of those now offering will be eagerly sought after at considerably higher prices immediately there is a run upon them.

Messrs. ENDEAN and Co. are prepared to deal in all the shares they recommend at close prices.

Messrs. ENDEAN and Co. strongly advise the purchase of CARN CAMBORNE shares. This mine lies between Dolcoath and South Condurrow; the former is selling for over £300,000, and the latter for nearly £80,000. Carn Camborne is in 6000 shares, now to be had for £2 5s. each. Vigorous operations will be at once commenced, and there is every reason to believe that Carn Camborne will prove in depth as rich as any of the great mines by which it is surrounded. Shares are CERTAIN to have a considerable rise in price. Good sales of tin and copper will be commenced within one month after the mine is in full work.

STOCK AND SHARE MARKETS.

Prices of STOCKS and SHARES in RAILWAYS, BANKS, ENGLISH and FOREIGN GOVERNMENT SECURITIES, GAS, MINES, INSURANCE, and other Stock Exchange Securities, and various important information forwarded on application to—

MESSRS. PETER WATSON AND CO.,
18, AUSTIN FRIARS,
OLD BROAD STREET, LONDON, E.C.

BUYER and SELLER of SHARES at the close Market Price of the day.

BANKERS: THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.'S
BRITISH AND FOREIGN MONTHLY MINING NEWS

—STOCK AND SHARE INVESTMENT NOTES—MINES, MINERALS, AND METAL MARKETS—SHARE LIST, NO. 816, VOL. XV., for MARCH month, is now ready, and will be sent to customers on application.

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IMPORTANT.

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SPECIAL NOTICE.

Mr. COOKE's Offices adjoin both the Stock Exchange and Mining Market, but for the further convenience of clients they are now in telegraphic communication with the Stock Exchange.

DAILY LIST OF PRICES ISSUED TO CLIENTS.

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76, OLD BROAD STREET, LONDON.
ESTABLISHED 1853.

Over 13 years at the above offices, adjoining the Stock Exchange and Mining Markets.

STOCKS AND SHARES,
FOREIGN BONDS, TELEGRAPHS, TRAMWAYS, RAILWAYS, AND OTHER LEADING SECURITIES.

MRS. JAMES STOCKER, STOCK BROKER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1848.

SPECIAL BUSINESS in the following:—

Almada Consol., 11s 3d East Pool, £2 34s.
Colorado, £2 2s. 20 Killifretch, 15s.
Carn Brea, £2 3s. 20 Penhalls.
Chontales, 3s. 3d. 25 Port Phillip, 11s.
Consolidated, 17s. 20 Ruby, £9 5s.
Derwent, £2. 25 Leadhills, £3 1 2s.
Devon Gt. Cons., £13 3s. 20 S. Indian Gold, £2 1 2s.
Don Pedro, 18s. 6d. 25 Wheal Grenville, £9 1 2s.
E. Rom. Gravels, 16s. 20 Wheal Pevor, £2 1 2s.
Frontino, £4 3s. 20 Wheal Trevithick, £1 10s.
Glenrock, £1 17 6s. 20 Wheal Trevarth, £1 10s.
Glenroy, 23s. 9d. 20 Wheal Trevethan, £1 10s.
Grogwinion, £3. 20 Wheal Trevethan, £1 10s.
Herodfoot, £3 17s. 6d. 20 Wheal Trevethan, £1 10s.
Hindston Down, 25s. 20 Wheal Trevethan, £1 10s.

BANKERS: LONDON AND WESTMINSTER.

MRS. JOHN POOLE, STOCK AND SHARE DEALER,
GRACECHURCH BUILDINGS, LONDON.

Has special and reliable information regarding the following mines, and he recommends the immediate purchase of the shares at present prices:—

Polrose (Tin). Wheal Crebor. Parys Corporation.
Prince of Wales. East Crebor. Morfa Du.

The prospects of these mines are excellent, particularly Polrose and West Cadron, in which a rise of 300 to 400 per cent. may be expected in the next few months. A rise of 100 per cent. on West Cadron has within the last month been realised. J. P. has Special Business in each at the closest net prices of the day.

MRS. JOHN RISLEY, STOCK AND SHARE BROKER,
38, CORNHILL, LONDON E.C.
ESTABLISHED 1858.

BANKERS: LONDON AND WESTMINSTER, Lothbury.

POLROSE TIN MINE and WEST CADRON MINE (Copper) specially recommended to investors.

The Polrose Mine is in a very rich district, and surrounded by mines which paid nearly £2,000,000 sterling in dividends. It is 370 fathoms long on the course of the lodes, of which there are 12. Polrose, down to the 50 fm. level, returned 23 tons of tin, realising £11,584.

From the 50 ft. shaft has been sunk perpendicularly, with the view to prosecute both lodes in depth. This shaft is now down below the 80, at which depth a short cross-cut was put out, and cut the Margaret lode, presenting the most encouraging features.

At the 90, and perhaps sooner, the lode will be in the shaft. When tin dropped to 40 per ton raising it was suspended, and operations confined to sinking the shaft.

The machinery on the mine consists of a steam pumping-engine, with two boilers, capable, we are informed, of taking the mine to the 150. A 24-inch stamping-engine, two boilers, and 60 heads of stamps, horizontal winding-engine complete, dressing-floors, calciner, tin-house, powder-house, dry and store-houses, &c., which, with the work done, has cost nearly £30,000. The company has a cash balance in hand of nearly £3000 over every liability. The grand point of the mine, irrespective of the Margaret lode and the working of the tin ground, is the intersection of the Polrose lode in depth, and it appears to us there are few tin speculations like it. It is the opinion of all those who have seen the mine, surrounded as it is by some of the richest tin mines in Cornwall, that great deposits of tin will be found in depth, and a good lode in the shaft which send shares to double their present price.

West Cadron was started and owned chiefly by Quakers in 1837, and upon a small outlay had paid up to 1861 £104,276 in dividends. The present company have within the last month made three very important discoveries. This celebrated old mine within a very short period will, in all probability, command its former market value—£120,000.

MESSRS. W. DUNN & CO., STOCK & SHARE DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C. ESTABLISHED 1868.

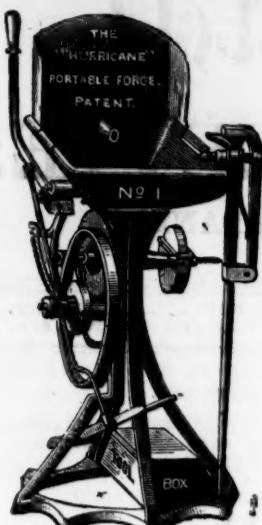
Can SELL the following SHARES at prices annexed:—

75 Almada, 13s. 6d. 40 Glenrock Gold, £1 17 6s. 100 Ross Grande, 5s. 6d.
75 Chontales, 3s. 3d. 20 Hington, £1 1s. 3d. 20 Ruby Silver, £9 15s.
20 Colorado, £2 17s. 6d. 15 Herodfoot, £3 18s. 9d. 30 So. Darren, £3 1 2s.
10 Consolidated, 18s. 10 Leadhills, £3 1 2s. 20 So. Darren, £3 1 2s.
70 Cedar Creek, 2s. 6d. 20 Marke Valley, £2 1 2s. 30 So. Indian Gold, £2 5s.
10 Derwent, £3 1 2s. 20 Minera, £1 11s. 40 Tamar Sil. Lead, £1 1 2s.
50 Don Pedro, 18s. 6d. 20 Nou. Monde, £2 7s. 6d. 40 Van & Glyn United, 16s.
20 East Cadron, £3 8 9s. 40 Parys Corp., £1 10s. 100 Pestarena, 6s. West Jewell, 19s.
20 East Crebor, 22s. 75 Port Phillip, £1 1s. 3d. 20 West Kitty, £1 16s. 6d.
10 East Van. 20 Eberhardt, £4 5s. 20 Panuelillo, £4 5s. 10 Wheal Crebor, £4 1 2s.
20 Eberhardt, £4 5s. 20 Prince of Wales, 16s. 3 20 Wh. Grenville, £2 1 2s.
30 Flagstaff, £2 6s. 3d. 50 So. Tolcarne, 19s. 3d. 25 Ystwith, £1 11s. 3d.
40 Glenroy, £1 4s. 6d. 50 So. Tolcarne, 19s. 3d. 25 Ystwith, £1 11s. 3d.
WBLCH UNITED MINES—SPECIAL BUSINESS in these shares.
SOUTH WHEAL CREBOR (Limited), £1 fully pd., strongly recommended at £1 1 2s.

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FOR DRAINING MINES, WATER SUPPLY OF TOWNS, IRRIGATION,
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A Complete
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a Forge,
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a Brazier's Hearth,
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a Tool Grinder (Emery),
a Cutter,
a Circular Saw and Bench,
a Polishing Wheel,
a Chuck,
Two Drills,
a Drill Rest,
and a Tool Box.



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The "HURRICANE" Patent Portable Forges possess advantages unobtainable with Forges of any other description. They command themselves to the world, not only as being complete and portable Smithies and mine and ship ventilators of the highest practical value, but also for the extreme ease with which they are worked, the simplicity and compactness of their construction, and the steady continuous blast, which speedily creates an unusually high degree of heat. The "Hurricane" Portable Forges are made in nine distinct sizes, embrace attachments which form a complete smithy, and are suitable for all purposes in all climates.

The Rivetter's Hearth is readily connected to the nozzle of the forge by means of a flexible tube, and can be used in any awkward position for keeping rivets hot and close to the work. The Brazier's Hearth is similarly worked, but is constructed with a nozzle on opposite sides for producing heat equally on both sides of the work, and is particularly adapted for brazing band saws, &c. Hand Blowers for all ventilating purposes, and for fixed blacksmiths' hearths, are made on a new principle.

The Lever Handle can be used at any angle, or taken off altogether, and the Treadle used instead. There is a Recovering Spring to raise the Handle or Treadle. This arrangement secures all the easy motion of the old-fashioned bellows, is worked with much less effort than the Rotary Hand Wheel, and there are no Leather Bands to be burnt, no Cranks, and consequently no "Dead Centres." Three larger sizes than those given below are kept in stock.

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No. 1.—FORGE, HEARTH (lined with fire-brick), and PAN 18 in. square, 2 ft. 7 in. high. Weight 132 lbs., with 8-in. patent Fan Blast, Spanners, and Emery Tool Grinder, complete, on standard	£5 15s. 0d.
No. 2.—DITTO DITTO. Weight, 156 lbs. Fitted with 24-in. Vice with Anvil, 4-in. Emery Wheel or Grindstone, Chuck, Cutter, and two Drills, a Buffing Wheel or Polisher, Spanner, Tool Chest, Lock and Key, &c. Lever and Treadle. Muffler, 15s. extra.	£7 7s. 0d.
No. 3.—FORGE AND HEARTH, 26 in. by 34 in. Weight, 160 lbs.: 10-in. patent Fan Blast, Spanners, and 5-in. Emery Wheel, complete on frame with four legs and two travelling wheels. Lever and Treadle	£8 8s. 0d.
No. 4.—DITTO DITTO. Weight, 184 lbs. Fitted with Two Travelling Wheels, 5-in. Circular Saw and Bench, and all the attachments of No. 2 Forge, but increased in suitable proportions. Hood, 21s. extra. Muffler, 33s. extra	£10 10s. 0d.
No. 5.—FORGE AND HEARTH, 30 in. by 42 in. Weight, 250 lbs. With 12-in. patent Fan Blast, Spanners, and 6-in. Emery Wheel, complete on frame with four legs. Fitted with Lever Treadle, Two Travelling Wheels, and Fast and Loose Pulleys for power	£12 12s. 0d.
No. 6.—DITTO DITTO. Weight, 280 lbs. Fitted with all the attachments of Nos. 2, 3 and 4 Forges, but proportionately increased in size. Hood, 30s. extra. Muffler, 42s. extra ...	£15 15s. 0d.
Rivettors' Hearths, 15 in. by 15 in., 21s. Braziers' Hearths, 15 in. by 15 in., 27s. 6d. Union and Sockets for 1½-in. tube, 12s. 6d. Flexible Tubing, 1½-in., 1s. 6d. per foot.	

The Foreman Engineer and Draughtsman of December 1st, 1879, states:—
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No. 1 size, 7 in. single cylinder, with 2 ft. drums.
No. 2 size, 9 in. single cylinder, 2 ft. 6 in. drums.
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B.—8 in. " " 3 ft. 0 in. drums.
C.—10 in. " " 3 ft. 6 in. drums.
D.—12 in. " " 4 ft. 6 in. drums.
E.—14 in. " " 5 ft. 0 in. drums.

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ABRIDGED CIRCULAR.

In consequence of the great rise in the price of lead in America, the directors have decided to offer the remaining unallocated shares of the company for subscription at par, in order to enable them to open up, develop, and work the mines on a larger scale, and thereby more speedily avail themselves of the favourable condition of the lead market in the United States.

Since the shares of the company were allotted the whole of the mines and properties have been conveyed to the company, and the title deeds duly recorded.

The property acquired consists of the Virginia, St. Clair, and Piney Lead Mines, situated in Franklin county, Missouri, in the United States of America, about five miles distant from the town of St. Clair, on the St. Louis and San Francisco Railway, fifty-five miles from the city of St. Louis, one of the best lead markets in the United States. The three properties comprise together an area of about 1190 acres; they are all freehold, and free from royalties. The Virginia lode runs from north to south, entirely through the Virginia and St. Clair estates, forming a continuous lode of about 1½ mile in length. It has been examined and reported on by Professor Swallow, former State Geologist of Missouri; Thomas Sopwith, Esq., C.E., mining engineer, of England; Captain William Richards, of Tavistock, Devon; and Captain J. B. Champion, of Cornwall, all of whom agree in pronouncing it a true fissure vein of great value. Captain Champion is now in charge of the mining operations.

Since the company has been in possession of the mines a large amount of expensive work has been done, and much new and valuable machinery added, including an additional steam-engine and boiler and two powerful pumps; a large supply of mining and general stores has been purchased; a large quantity of cord wood and timber cut from the company's estate and hauled to the works. All the machinery is in good order and working well, and the under-

ground developments are being rapidly pushed forward by means of a powerful air compressor and rock drills. Ore is now being raised, and Captain Champion reports the lode as worth, in three different levels, 1½, 2, and 3 tons per sathorn respectively. An increased force of miners will be put to work at once, and it is expected that in two months from this time sufficient ore will have been raised to keep the furnaces regularly running, and that soon thereafter the directors will be able to commence paying dividends.

As regards the rate of production, Capt. Champion estimates that the Virginia Mine alone, when fully developed and opened up, will produce as much as 1400 tons of galena per month, yielding 1000 tons of pig-lead, at a cost of £10 per ton. Taking, however, a yield of only 250 tons per month, at a cost of £12 per ton, the mines would pay a profit of £36,000 per annum, or 40 per cent. on the total capital.

Thus, 250 tons of pig-lead, at £24 per ton of 2240 lbs.

(the present price in St. Louis is £26 per ton)..... £6000

Cost of producing and delivering same in St. Louis,

at (say) £12 per ton 3000

Monthly profit £3000

Or an annual profit of £36,000.

Since the company acquired these mines the price of lead in America has advanced from £16 to £26 per ton. The production in the United States for 1880 is estimated at 95,000 tons, and the consumption 120,000 tons. For many years previous to 1877 the average price of lead in America ranged from £28 to £30 per ton, and from present indications these prices are likely to prevail again.

Full circulars, reports, and forms of application for shares may be obtained of the secretary at the offices of the company, or at 53, Coleman-street, E.C.

Registration of New Companies.

The following joint-stock companies have been duly registered:

THE LAND AND MORTGAGE COMPANY OF EGYPT (Limited).—Capital 1,000,000*l.*, in shares of 20*l.* To carry on generally the business of a land and financial company. The subscribers (who take one share each) are—O. Toa, 175, Camden-road; R. V. Hayday, Clapham; H. Clark, Richmond; S. J. Roberts, West Kensington; W. Hart, 14, Hamilton-terrace; J. D. Bird, Cambridge Heath; W. E. Alwright, Clapham.

J. MORRELL AND COMPANY (Limited).—Capital 100,000*l.*, in shares of 100*l.* To acquire and continue a general provision business in Liverpool and Birkenhead. The subscribers (who take one share each) are—J. Morrell, sen., Southport; G. Morell, Liverpool; A. Illingworth, Birkenhead; F. Haigh, Birkenhead; J. Morrell, jun., Liverpool; T. Morrell, Birkenhead; F. Jackson, Bradford.

DOWSON ECONOMIC GAS COMPANY (Limited).—Capital 8000*l.*, in shares of 50*l.* To manufacture and sell a patented apparatus for the use of gas. The subscribers (who take one share each) are—C. Clark, Great St. Helens; J. F. C. Haywood, Gloster; S. P. Konarski, Devonport; J. E. Dowson, 3, Great Queen-street; C. E. Webber, 29, Dowson-place; J. H. Maitland, United Service Club; A. C. C. Hayward, 4, Bishopsgate-street Within.

THE WILTSHIRE DAIRY COMPANY (Limited).—Capital 15,000*l.*, in shares of 50*l.* To carry on a milk and dairy business, the sale of butter, &c. The subscribers are—W. P. Newman, Dowgate-hill, 20; H. Johnson, 1, King's Arms-yard, 20; J. T. Wafts, 9, Queen's-road, 20; H. J. Foster, 3, Copthall Buildings, 1; C. Height, 3, Copthall Buildings, 1; W. G. Durrant, Woodford, 1; E. Watkins, Peckham Rye, 1.

THE ASHTED BREWERY COMPANY (Limited).—Capital 60,000*l.*, in shares of 100*l.* To acquire and carry on a brewer's business at Birmingham. The subscribers are—G. Wilkinson, Birmingham, 5; S. C. Cowan, Moseley, 5; F. D. Hunt, Leamington, 10; S. H. Main-tain, Southwark, 5; W. J. Reeve, Birmingham, 5; J. Collett, Southwark, 1; S. Wilkinson, Walsall, 10.

THE INTERNATIONAL HYDROPATHIC COMPANY (Limited).—Capital 60,000*l.*, in shares of 30*l.* To purchase a mansion at Seaford for the purpose of a hydropathic establishment. The subscribers (who take one share each) are—J. Hubbard, Liverpool; J. Boulton, Chester W. H. Dixon, Hooton; G. B. C. Stanleigh, Rock Ferry; W. Boulton, Bootle; D. Rollo, Waterloo; G. Scott, Liverpool; S. Brod-dick, Liverpool.

THE TREMADOC SETT AND PAVING STONE COMPANY (Limited).—Capital 15,000*l.*, in shares of 50*l.* To acquire a certain property situate in Carnarvonshire, and delope the same. The subscribers (who take one share each) are—A. Hiley, Bristol; A. Howell, Weston-super-Mare; E. Stutchbury, Bristol; T. Lund, 24, Martin's-lane; C. H. Williams, Gloucester; H. H. Howes, Bristol; J. R. Shorland, Clifton.

THE SHEPLEY MILLS IMPROVED CORTICINE FLOOR CLOTH COMPANY (Limited).—Capital 15,000*l.*, in shares of 20*l.* To carry on at Shepley Mills, near Manchester, or elsewhere, the manufacture of floor-cloth, &c. The subscribers are—H. Barlow, Gee Cross, 25; Z. B. Smith, Hyde, 15; J. Wild, Hyde, 7; E. N. Taylor, Badbury, 50; R. Foster, Stockport, 15; T. E. Mason, Kingston, 25; J. Oldham, Swindon, 2.

THE SWINDON CLUB COMPANY (Limited).—Capital 5000*l.*, in shares of 1*l.* The acquiring and maintaining premises for purposes of a club. The subscribers are—W. Dawson, Swindon, 5; W. Morris, Swindon, 5; F. Buckland, Swindon, 1; A. Wainwright, Swindon, 5; H. Hudson, Swindon, 5; J. Sykes, New Swindon, 4; R. Carrier, New Swindon, 2.

H. A. BROWN AND COMPANY (Limited).—Capital 5000*l.*, in shares of 1*l.* To act as lightermen, wharfingers, general carriers, and forwarding agents. The subscribers (who take one share each) are—H. A. Brown, Battersea; M. J. Burns, Brixton Hill; W. S. Hancock, Limehouse; S. B. Naylor, 59, Wapping Wall; C. Davis, West Hackney; C. Lamb, Lewisham; W. Macleay, 18, Colville-square.

CASSELL'S PUBLICATIONS.—Science for All, part 30, contains the conclusion of Deep Sea Life; Jupiter, by W. F. Denning; How a Snow Flake is Formed, by Dr. R. J. Mann; Coral Islands, by Prof. P. M. Duncan; and on the Philosophy of a Glance, by Wm. Ackroyd. The History of Protestantism, part 11, extends from the date of the Battle of Pavia until the time of the meeting of the Emperor and the Pope at Bologna. The Great Industries of Great Britain, part 28, contains continuations of the articles on Model Establishments; Health and Disease in Industrial Occupations; Shipbuilding; Cotton, Wool, and Worsted; Industrial Art; and Pottery and Porcelain. Knight's Dictionary, part 41, extends from Leather-skiving Machine to

PARLIAMENTARY REPRESENTATION.—A new political map of Great Britain and Ireland, showing the parliamentary representation as decided by the recent elections, has just been issued by Mr. James Wyld, the well-known map seller of Charing Cross. The counties, divisions of counties, and boroughs are carefully shown; the political bias of the members—Conservative, Liberal, and Home Rulers—being shown by distinctive colours. The number of voters of each party at the last two elections are given, so that all the information likely to be required with regard to the elections can be readily obtained.

CONSTRUCTOR.—The third number of this excellent little technical magazine contains a continuation of the articles on Formularies for the Strength of Materials; on the Organisation of the Public Works Department in France; and interesting industrial The information given is sound and practical, and will no doubt be generally appreciated wherever the Portuguese language is used.

LETTS'S POPULAR ATLAS.—The third part of this Atlas has just been issued, and includes general maps of Europe, of India, and of France. The corrections are carefully made to date, and the chromo-lithography is excellent, so that the results of the Berlin Treaty are clearly seen in the re-arrangement of the states of the East of Europe, whilst the new Afghan frontier and the recent discoveries in the north-west mountain district are indicated with regard to India. In the map of France the different wine growing districts are indicated as well as the principal markets and outlets for the wine produced. The contrast of colour used is very striking, and by its special application it is made to convey a large amount of information, such as the depth

of the ocean, the relative population of large cities, the gradual extension of the Russian Empire, and so on. It is the expressed intention of the publishers to arrange the issue in such a manner that 12 months' numbers will comprise a good general atlas, the issue of succeeding years furnishing the necessary additional details concerning the countries and districts treated of.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINES SHARE MARKET.—Mr. S. J. DAVRY, mine-share-dealer, Truro (April 29), writes:—Business was slow, and prices were drooping in our market until Wednesday evening, when a better demand sprung up, prices recovered, and closed at a substantial improvement. The tin standards fell 4*s.* on Monday. The following are today's prices:—Blue Hills, 3½ to 4; Carn Brea, 86 to 88; Cook's Kitchen, 7½ to 8; Dolcoath, 57½ to 58½; East Pool, 33½ to 34; Mellanear, 5 to 5½; New Cook's Kitchen, 6½ to 7; North Busy, 1½ to 1½; Penhale, 2½ to 3; South Condurrow, 11 to 11½; South Croft, 14½ to 15½; South Frances, 18 to 18½; Tincroft, 19 to 19½; West Bassett, 19 to 19½; West Frances, 15½ to 17; West Seton, 21 to 23; West Tolgs, 50 to 52½; West Peevor, 7 to 8; West Polidice, 2 to 2½; Wheal Agar, 6½ to 7; Wheal Bassett, 3½ to 4½; Wheal Grenville, 8½ to 9½; Wheal Jane, 3½ to 4½; Wheal Kitty, 5 to 5½; Wheal Peevor, 27½ to 28½; Wheal Uny, 4 to 4½; Wheal Prussia, 1½ to 1½; Wheal Uny, 4 to 4½.

—**MR. JOHN CARTER**, mine-share-dealer, Camborne (April 29), writes:—The Cornish mine share market was dull and prices depressed up to Monday, when the tin standards were again reduced 4*s.*, making them 78s. and 79s. Since which prices of mine shares had steadily improved, a large business has been transacted, and prices close at best to-day. Quotations subjoined:—Blue Hills, 2½ to 3½; Carn Brea, 86 to 87; Cook's Kitchen, 3½ to 4; East Pool, 33 to 34½; Killifretch, 3½ to 4; Mellanear, 5 to 5½; New Cook's Kitchen, 6½ to 7; North Busy, 1½ to 1½; Penhale, 2½ to 3; Phoenix, 5 to 5½; Pendeville, 8 to 8½; Ped-an-Ire, 15 to 17½; South Condurrow, 11 to 11½; South Croft, 14½ to 15½; South Frances, 18 to 18½; Tincroft, 18½ to 19½; West Bassett, 18 to 18½; West Frances, 16 to 16½; West Peevor, 7 to 7½; West Seton, 21 to 23; West Tolgs, 52 to 54; Marke Valley, 2 to 2½; Mellanear, 5 to 5½; New Cook's Kitchen, 6½ to 7; North Busy, 1½ to 1½; North Herodsfoot, 5 to 5½; North Penstruthal, 1½ to 2; Ped-an-Ire, 3½ to 4; Phoenix, 5 to 5½; South Caradon, 130 to 140; South Condurrow, 11 to 11½; South Croft, 14½ to 15½; South Frances, 18 to 18½; Tincroft, 18½ to 19½; West Bassett, 18 to 18½; West Frances, 16 to 16½; West Peevor, 7 to 7½; West Seton, 21 to 23; West Tolgs, 50 to 55; Wheal Agar, 6½ to 7; Wheal Bassett, 3½ to 4½; Wheal Crebor, 4½ to 5; Wheal Grenville, 8½ to 9½; Wheal Jane, 4 to 4½; Wheal Peevor, 27 to 28; Wheal Uny, 4 to 4½; Wheal Jewell, 1 to 1½; Wheal Prussia, 1½ to 2; Wheal Sisters, 3½ to 4.

—**MR. J. H. REYNOLDS**, stock and share broker, Redruth (April 29), writes:—The Cornish mine share market during the early part of the week was dull and depressed, on the announcement of a drop of 4*s.* in the standards, but has now somewhat recovered itself on an improvement in the metal market, and closes as follows:—Blue Hills, 3½ to 4; Carn Brea, 85 to 87; Cook's Kitchen, 3½ to 4; East Pool, 33 to 34½; Killifretch, 3½ to 4; Mellanear, 5 to 5½; New Cook's Kitchen, 6½ to 7; North Busy, 1½ to 1½; Penhale, 2½ to 3; Phoenix, 5 to 5½; Pendeville, 8 to 8½; Ped-an-Ire, 15 to 17½; South Condurrow, 11 to 11½; South Croft, 14½ to 15½; South Frances, 18 to 18½; Tincroft, 18½ to 19½; West Bassett, 18 to 18½; West Frances, 16 to 16½; West Peevor, 7 to 7½; West Seton, 21 to 23; West Tolgs, 52 to 54; Marke Valley, 2 to 2½; Mellanear, 5 to 5½; New Cook's Kitchen, 6½ to 7; North Busy, 1½ to 1½; North Herodsfoot, 5 to 5½; North Penstruthal, 1½ to 2; Ped-an-Ire, 3½ to 4; Phoenix, 5 to 5½; South Caradon, 130 to 140; South Condurrow, 11 to 11½; South Croft, 14½ to 15½; South Frances, 18 to 18½; Tincroft, 18½ to 19½; West Bassett, 18 to 18½; West Frances, 16 to 16½; West Peevor, 7 to 7½; West Seton, 21 to 23; West Tolgs, 50 to 55; Wheal Agar, 6½ to 7; Wheal Bassett, 3½ to 4½; Wheal Crebor, 4½ to 5; Wheal Comford, 4½ to 5; Wheal Grenville, 8½ to 9½; Wheal Jane, 4 to 4½; Wheal Peevor, 27 to 28; Wheal Uny, 4 to 4½; Wheal Jewell, 1 to 1½; Wheal Sisters, 3½ to 4.

—**MR. M. W. BWDEN**, Liskeard (April 29), writes:—The mining market throughout the week has continued dull, and transactions limited. The reduction in the price of tin has not had the depreciating influence on the price of shares as might have been expected. To-day foreign tin is quoted 2*d.* better, and the market presents an improved appearance. Subjoined are the closing prices:

—Bedford United, 5 to 5½; Dolcoath, 55 to 56; Devon Consols, 13 to 13½; East Caradon, 3 to 3½; East Buller, 1½ to 1½; East Pool, 32 to 33; Gwanton, 1½ to 1½; Glasgow Caradon, 13 to 13½; Herodsfoot, 4 to 4½; Hindon Down, 1½ to 1½; Marke Valley, 1½ to 2; Phoenix, 5 to 5½; Prince of Wales, 1½ to 1½; South Caradon, 12½ to 13; South Croft, 14½ to 15½; South Frances, 17 to 17½; Tincroft, 13½ to 19; West Bassett, 13 to 13½; West Frances, 16 to 16½; West Mary Ann, 1½ to 1½; West Phoenix, 2½ to 2½; Wheal Agar, 6½ to 7; Wheal Crebor, 4 to 4½; Wheal Grenville, 8½ to 9; Wheal Peevor, 27 to 28; Wheal Uny, 4 to 4½.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, sharebrokers, Queen's Chambers, Market-street (April 29), write.—The only class of securities in which anything like activity has been experienced during the past week has been railways, and here several fluctuations, more or less violent, are to be noticed. Industrial concerns, following the state of trade generally at present ruling throughout the country, are dull and heavy to sell, and prices in most cases have again suffered adverse change, some few very severe. In some cases, however, the prices of to-day are better than the worst of the week, and this tends to prove that it is not an all round fright that has got deeply rooted in the minds of the public, but that if prices reach again a somewhat lower level there are individuals ready to buy, and this element will doubtless keep the market from slipping without interruption. Some time ago concerns at much lower quotations than now ruling were altogether scorned, the belief being seemingly held that they had no intrinsic value whatever; now, however, the prospect is that, with an ordinary trade, many, if not all, of these undertakings would make money, and consequently a demand is kept up at figures somewhere about what have of late been quoted. The demand which set in when the sudden rise took place was in most instances a speculative and unhealthy one, and it ran "wild." The present easing off is only a reasonable sequel, and will doubtless result in a careful study of the several and respective positions of each individual undertaking, and the prices probably will become more in proportion to their intrinsic value than has of late been the case.

BANKING CONCERN do not show many transactions, and what business has been done is mostly solitary transactions. Prices realised are about figures lately marked, and the dealings are without feature. Bolton Bank, A, have been done at full quotations, and sellers are scarce. The alterations are few, but are all for the better. They are—National Provincial 1, ditto new, ½, and Manchester Joint-Stock Bank ½ higher.

INSURANCE.—The chief dealings have been in Thames and Mersey and Marine and Lancashire, both at about top figures. The alterations are pretty evenly balanced. Higher: United Fire-Re-Insurance ½, Royal (Liverpool)

shares would have a big rise. It is said that the genuine Black Country Thick Coal has been pierced by the Hamstead Colliery Company. The seam is a little thicker than that of Sandwell Park and brighter, but the quality is in all respects quite equal to the former. The meeting of the Nerbudda Coal and Iron Company will be on May 4. The Fifie Coal Company has made a call of 1s. per share, payable on May 19. Glasgow Coal Exchange shares 30s. to 40s. Andrew Knowles and Son are at 10s. ditto; Ashton Vale, 8s.; Antim Iron Ore, A, 33s. 6d.; Bilbao, 23s.; Boleckow, Vaughan, A, 77s. to 78s.; ditto, B, 38s.; ditto, stocks, 12s. to 13s.; Chillington Iron, 35s. to 90s.; Charles Cannell and Company, 8s. 6d.; Clyde Coal, 6s.; Chatterley Iron, 10s.; Consett Iron, 16s.; Cardifff and Swansea, 50s. to 55s.; Darlington Iron, 7s. 6d.; Ebbw Vale, 10s. to 10s.; Fifie Coal, 7s. 6d.; Great Western Colliery, 80s.; Henry Briggs, Sons, and Co., 12s.; John Brown and Co., 13s. ditto; John Bagnall and Sons, B, 2s. 6d.; Leeds and Yorkshire Co-operative Coal, 60s.; Mwyndy Iron, 40s. to 50s.; Marbella, 6s.; Monkland Iron and Coal, 6s.; ditto, preference, 5s. to 6s.; Muntz's Metal, 15s.; Newport Abercarn, 6s. to 7s.; Nerbudda Coal and Iron, 6s. to 8s.; Oakham Colliery, preference, 10s.; Omoa and Cleland, 27s. to 29s.; Parkgate Iron, 95s. prem.; Pelsall Coal and Iron, 50s. ditto; Rhymney, 26s.; Scottish Australian, 40s. to 45s.; Sheepbridge, 14s.; Steel Company of Scotland, 10s. to 10s.; ditto (new), 5s.; Sandwell Park, 15s.; Shearne Iron, 75s.; South Wales, 50s.; Staveley, A, 23s. prem.; ditto, C, 37s.; Thorpe Gawber Hall, 30s. to 40s.; Tredegar, B, 23s.; and Ulverston, 12s.

In shares of foreign copper and lead companies Tharsis have advanced 1s. per share, and Panulicillo 2s. 6d. Rio Tinto shares are now quoted ex dividend, and generally firmer. On the other hand, Copiapo are reduced 10s. per share, Canadian Copper 3s., and Yorke Peninsula (pref.) 2s. 6d. The accounts of the Panulicillo Company for the half-year ending Dec. 31 show a net profit of 12,175s. The average realised price was \$17.84 per quintal metrico. Tharsis declined to 31s., but have recovered to 32s.; Copiapo, 10s.; Fortuna, 5s.; New Querida, 80s.; Panulicillo, 8s. to 90s.; Rio Tinto Five per Cent, 94s.; Virneberg, 35s. to 40s.; Yorke Peninsula, 5s. to 7s. 6d.; ditto (Pref.), 20s. to 25s.

Shares of home mines have been dull, but there is no important alteration in prices. Glasgow Caradon shares remain about 30s. It is said there has been a good improvement at the Bettws-y-Coed Mine. Aberdaunant are at 2s.; Asheton, 11s. 3d.; Cook's Kitchen, 7s.; Carn Brae, 34s.; Dorew, 5s. 3d.; Dolcoath, 57s.; East Chiverton, 30s.; East Wheal Buller, 20s. to 30s.; East Roman Gravels, 12s. 6d.; East Pool, 32s.; Great Laxey, 13s.; Gunnislake (Clitters), 5 to 5s.; Hington Down, 25s. to 27s. 6d.; Killifirth, 12s. 6d. to 17s. 6d.; Lady Bertha, 4s. 6d.; Mondy Gordou, 70s.; Mid-Devon Copper, 10s. 6d.; North Bury, 20s. to 30s.; North Molton, 15s.; New Kitty, 25s. to 30s.; Nant Rhyd, 10s. 6d.; Old Gunnislake, 5s.; Parys Copper, 27s. 6d. to 32s. 6d.; Pateley Bridge, 18s.; Prince Patrick (10 per cent. pref.), 30s.; Pant-y Mwyn, 40s.; Roman Gravels, 10s.; South Darren, 67s. 6d.; South D'Esby, 20s. 6d.; South Cambrian, 3s. 6d.; South Frances, 18s.; South Tolcarne, 18s. 9d.; South Condurrow, 11s.; Tankerville, 5s.; Tamar, 27s. 6d.; Van, 19s.; West Kirby, 40s.; West Caradon, 3s.; West Bassett, 19s.; West Pateley Bridge, 37s. 6d.; Wicklow Copper, 9s. to 11s.; Wheal Owles, 8s.; Wheal Crebor, 75s. to 85s.; Wheal Peevor, 2s.; Wheal Jane, 4 to 5s.; Ystwith Lead, 25s.

In shares of gold and silver mines Richmonds are easier. This week's run is \$75,000. The company has declared a dividend of 7s. 6d. per share. Javali shows a profit of 12s. In February. The profit in April at St. John del Rey has been 22s. In February the Frontino Company has a profit of 21s. Almada debentures offered; Almadas are at 11s. 3d.; Australian Mines, 5s.; Chontales, 2s. 6d. to 2s. 9d.; Cedar Creek, 2s.; Colorado, 57s. 6d.; Chicago Silver, 5s.; Consolidated, 15s. to 20s.; Don Pedro, 17s. 6d.; Eberhardt, 85s.; Emma, 10s.; Exchequer, 8s. 6d.; Flagstaff, 4s.; Frontino, 65s.; Glenrock, 37s. 6d.; I.X.L., 8s. 9d.; Last Chance, 2s. 6d. to 7s. 6d.; New Zealand Kapanga, 17s. 6d. to 22s. 6d.; Port Phillip, 8s. 9d. to 11s. 3d.; Postarena (pref.), 20s. to 25s.; Rio Grande do Sul, 5s. 6d.; Ross Grande, 5s. 6d.; Ruby, 9s.; Santa Barbara, 50s. to 55s.; Tecoma, 3s. 9d. to 6s. 6d.; and United Mexican, 47s. 6d.

In shares of oil companies the tendency of prices has been upwards. Uphill have advanced 12s. 6d. per share; Broxburn, 5s.; Oakbank Oil, 2s. 6d.; ditto New, 1s.; Young's Paraffin firm, 11 to 11s. 3d.; Runcorn Soap and Alkali, 10s. per cent.

In shares of miscellaneous companies there is no particular change to notice. Fairbairn Engineering shares still offered. Avondale Engine, 57s. 6d. ditto; Earle's Shipbuilding, 18s.; Hopkins, Gilkes, and Co., 40s.; London and Glasgow Engineering have advanced to 25s.; Milner's Safe, 9s.; Neuchatel, 15s. to 20s.; Phospho-Guanco have advanced to 5s. Prices of wagon companies' shares are—Ashbury new, 5s. ditto; Bristol, 30s. ditto; Bristol and South Wales, 47s. 6d. prem.; Birmingham, 15s.; Gloucester, 9s.; Metropolitan, 70s. prem.; Midland, 11s.; Railway Carriage, 5s.; Railway Rolling Stock, 7s.; Swansea, 7s. 6d.; Western, 5s.; and United States Rolling Stock, 20s. Prices of chemical companies' shares are—Langdale, 60s. to 62s. 6d.; Lawes, 5s. to 6s.; and Newcastle, 9s. to 92s. 6d.

BROXBURN OIL COMPANY (Limited).—The report of this company for the year ending March 31 last shows a profit of 42,117. A dividend at the rate of 25 per cent. is recommended, leaving 46,117 to be added to the reserve funds. As the company held 750 deferred shares, on which 1875s. of dividends will be paid, the sum to be actually carried forward will be 64,927, or equal to 5 per cent. on the capital.

On Contango Day the following were the rates of continuation current:—3d. 4d., 9s. 6d. on Benhar Coal, 5d., 6d., 7s. 6d., 7d., on Canadian Copper, 5d. on Clyde Coal, 1s. 6d., 2d., 1d. on Caradon, 1d. on Caradon New, 2d. on Don Pedro, 3d., 2d., 1d., 2d. on Glasgow Port Washington, 7d. on Huntington, 4d., 3d., 2d., 2d. on Marbella, 4s. 6d., 4d. on Monkland Iron, 6d. on pref., 2d. on North Molton, 11s. 6d. on Neufchâtel Rock, 4s. 6d. on Parys Copper, 6d. on Port Nigel Mine, 10s. 6d. on Richmond Mine, 2d., 3d. on Omoa, 3d. on Rio Tinto, 1s. 6d. on Roman Gravels, 10s. 6d., 7s. 6d., 6d. on Steel Company, 6d. on South Indian Gold, 2s. 6d., 2s. 3d., 2s. 6d. on Tharsis, 4s. 6d. on West Kirby, 2d. on Wicklow Copper, 2s. on Brockburn, 4s. 6d., even on Uphill, 6d., even 7s. 6d. on Young's Paraffin, 1s. 3d. on Indiarubber, 6d. on Flagstaff Mine, 1s. 9d. on Panulicillo, 7s. 6d. on Shotts. On comparing the making-up prices fixed to-day for the under-mentioned shares with those current for the same shares at the previous settlement, the variations shown to have taken place in the shares named during the past account are as follow:—Monkland Preference and Young's Paraffin have declined 12s. 6d. per share; Glasgow Port Washington, 11s. 6d.; Steel Company of Scotland, 10s.; Marbella, 3s. 6d.; Panulicillo and Flagstaff, each 7s. 6d.; Huntington, 6s.; Monkland and Uphill, each 5s.; Clyde Coal, 3s.; Benhar and Steel Company of Scotland, New, each 2s. 6d.; Canadian Copper, Glasgow Caradon, New, and Omoa and Cleland, each 2s. On the other hand, Richmonds have advanced 20s. per share; Rio Tinto, Tharsis, and Broxburn Oil, each 5s.; and Oakbank Oil, 2s. 6d.; Glasgow Caradon, Shott's Iron, and United States Rolling Stock are all unaltered.

NORTHERN STONE AND MARBLE COMPANY (Limited).—This company's property consists of most extensive and valuable marble quarries and deposits in Norway, upon an estate of upwards of 1200 acres. The strata of white marble are developed over an area of several acres, and from the investigations made it is apparent that the supply is unlimited. The quarries now worked are close to the water's edge, and a suitable wharf has been erected on the shore, so that ships can be loaded alongside. The quality of the marble is of a high class, and not surpassed by the celebrated Carrara. There are large deposits of white marble suitable for ordinary commercial purposes. The directors consider a single acre in their property may produce marble to the value of above 100,000. The cost of extending the working, the company are now issuing 10 per cent. debentures for the moderate sum of 500,000., and each subscriber of 50s. will be entitled to a bonus of 10%.

LEVANT TIN AND COPPER MINE.—This property is situated at St. Just, near Land's End, Cornwall, and is now believed to be working at a profit. A very considerable quantity of productive ground is now laid open, and the extensive sett still comprises several unwrought ledges of great promise. All the machinery and appliances have been placed into a thorough efficient state of repair and working order. The mine formerly paid 200,000. in dividends, and is now conducted on the Cost-book System, in 2500 shares.

GLASGOW CARADON MINING COMPANY.—The sale of 160 tons of copper ore by this company, on April 22, realised 7802. 15s. 6d., or an average of 97s. 7d. per ton. Last month's sale was 160 tons, at an average of 77s. 5d. per ton; while the sales in April for several years past have been—in 1879, 190 tons, at an average of 68s. 7d.; in 1878, 225 tons, at 88s. 3d.; in 1877, 240 tons, at 84s. 6d.; in 1876, 240 tons, at 10s. 9d.; in 1875, 250 tons, at 10s. 7d.; and in 1874, 280 tons, at 91s. 10d. This is their fourth sale for the current financial year, and the proceeds of these four sales, as compared with those of the corresponding half-year, show an increase of 187%, for 128 tons less ore.

ROMAN GRAVELS COMPANY (Limited).—The report for the tenth annual meeting on May 10, states the sales of lead and blende have been 26,205L, and the profit 8661L, which includes 4310L brought forward. The manager's report is favourable, and he states if lead advances to 13L or 14L a ton they will push the returns, so as to pay larger dividends. Movements in these shares are, therefore, to be guided by the price of lead.

WICKLOW COPPER MINE COMPANY.—The report of this company for the half-year ended March 1 last has just been issued for the meeting on April 30. The limited business done in minerals would have been attended with somewhat greater profit but for an exceptional outlay in clearing the debris from the iron lode to get access to the ore, for which a demand had arisen owing to an improvement in the iron trade. On the other hand the demand for pyrites was under the average; 683 tons of pyrites and 582 tons of ore have been raised. The collapse of agricultural credit has curtailed the manure trade very seriously, and having large stocks in hand the directors are reluctant to manufacture any considerable quantity this year. The prospect of a good harvest has done something to inspire confidence, and the directors trust to be able to report more satisfactorily to the next meeting.

EDINBURGH.—Messrs. THOMAS MILLER and SONS, stock and sharebrokers, Princes-street (April 29), write:—The changes in mining shares within a week comprise a fall in Benhars from 52s. to 46s. 6d., and a recovery to 48s.; a fall in Clyde Coal from 67s. to 60s., and a recovery to 65s.; a rise in Glasgow Port Washington from 57s. 6d. to 61s.; a rise in Huntington from 30s. to 31s.; a fall in Marbellas from 64s. to 63s., and a recovery to 67s.; a rise in Tharsis from 31s. to 32s.; a rise in Broxburn Oil from 21s. to 21s.; a rise in Oakbank from 42s. to 45s.; a rise in Uphill from 8s. to 8s. 6d.; a decline in Canadian Copper from 5s. to 6s.; a decline in Monkland Preference from 5s. to 6s. Bank stocks have been in good demand. Bank of Scotland has risen 1s. to 28s.; British Linen 2s. to 27s.; Commercial Bank 5 to 22s.; National 3s., to 26s.; Union, 1s., to 217s.; Clydesdale 2s. to 212s.

IRISH MINING AND MISCELLANEOUS COMPANIES' SHARE MARKET.

DUBLIN, APRIL 29.—There is very little business doing in any securities, and mining shares are almost more inactive than others. Berehaven have been done at 5s., Killaloe Slate at 11s., and Mining Company of Ireland at 2s., and at present there is very little disposition to deal, even at those prices. There is, however, some confidence that when political matters become more settled there will be a rapid and general revival.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (April 28), write:—There was no special feature in markets during the past week, but prices remain very steady. Great Southern and Western stock advanced to 116s., and Midland to 95s. Port Abercarn, 6s. to 9s.; Charles Cannell and Company, 8s. 6d.; Clyde Coal, 6s.; Chatterley Iron, 10s.; Consett Iron, 16s.; Cardifff and Swansea, 50s. to 55s.; Darlington Iron, 7s. 6d.; Ebbw Vale, 10s. to 10s.; Fifie Coal, 7s. 6d.; Great Western Colliery, 80s.; Henry Briggs, Sons, and Co., 12s.; John Brown and Co., 13s. ditto; John Bagnall and Sons, B, 2s. 6d.; Leeds and Yorkshire Co-operative Coal, 60s.; Mwyndy Iron, 40s. to 50s.; Marbella, 6s.; Monkland Iron and Coal, 6s.; ditto, preference, 5s. to 6s.; Muntz's Metal, 15s.; Newport Abercarn, 6s. to 7s.; Nerbudda Coal and Iron, 6s. to 8s.; Oakham Colliery, preference, 10s.; Omoe and Cleland, 27s. to 29s.; Parkgate Iron, 95s. prem.; Pelsall Coal and Iron, 50s. ditto; Rhymney, 26s.; Scottish Australian, 40s. to 45s.; Sheepbridge, 14s.; Steel Company of Scotland, 10s. to 10s.; ditto (new), 5s.; Sandwell Park, 15s.; Shearne Iron, 75s.; South Wales, 50s.; Staveley, A, 23s. prem.; ditto, C, 37s.; Thorpe Gawber Hall, 30s. to 40s.; Tredegar, B, 23s.; and Ulveston, 12s.

In shares of foreign copper and lead companies Tharsis have advanced 1s. per share, and Panulicillo 2s. 6d. Rio Tinto shares are now quoted ex dividend, and generally firmer.

On the other hand, Copiapo are reduced 10s. per share, Canadian Copper 3s., and Yorke Peninsula (pref.) 2s. 6d. The accounts of the Panulicillo Company for the half-year ending Dec. 31 show a net profit of 12,175s. The average realised price was \$17.84 per quintal metrico. Tharsis declined to 31s., but have recovered to 32s.; Copiapo, 10s.; Fortuna, 5s.; New Querida, 80s.; Panulicillo, 8s. to 90s.; Rio Tinto Five per Cent, 94s.; Virneberg, 35s. to 40s.; Yorke Peninsula, 5s. to 7s. 6d.; ditto (Pref.), 20s. to 25s.

Meetings of Public Companies.

THE SCOTTISH AUSTRALIAN MINING COMPANY.

The half-yearly meeting was held at the Cannon-street Hotel, yesterday, Mr. A. W. YOUNG in the chair.

The SECRETARY (Mr. C. Grainger) read the notice convening the meeting. The directors' report was taken as read. It states—

The company's sales of coal amounted to 101,778 tons for the half-year ending the 21st of December last, and the net profit realised from the colliery during that period to 16,431s., as is shown by the annexed colliery profit and loss account; the necessary disbursements for maintenance and renewal having been made. The strike which occurred at the colliery in August last, the cause of which were fully explained in the last report of the directors, by stopping work for the best part of a month, has caused the company's output of coal during the half-year ending at 31st December last, and the corresponding profit, to be less than they would otherwise have been. Both before and after the strike the trade of the colliery has been well maintained, and the Board consider it matter for congratulation that the company's business has passed through so serious a difficulty in so satisfactory a manner. While the coal trade of the northern collieries during 1879 was fairly active, towards the end of that year a demand for shipping to bring wheat to this country from South Australia and the Western ports of America, caused a scarcity of tonnage available for carrying coal to be experienced. Consequently the shipments of Australian coal to Eastern ports were diminished, and the collieries left more than usually dependent upon the intercolonial coal trade, which although steadily growing, is not at present sufficient to absorb the ordinary production of the collieries now at work. The amount of the general trade of the northern collieries during 1879 shows a falling off, when compared with that of 1878, of upwards of 100,000 tons. The Board have reason to believe that the arrangements entered into by a majority of the other collieries for regulating the vend, the price, and the rate of miners' wages, have been terminated since the commencement of the present year, and according to the latest telegraphic advices from the company's manager, they learn that there had been a reduction in the price of coal. This, however, would not doubt carry with it a commensurate reduction in the rate of wages. Full particulars of this change have not yet reached the Board, but it may reasonably be anticipated that it will be attended by an increased sale of Australian coal as soon as shipping shall be available for carrying it, as at a reduced price, and with reasonable rates of freight, it will again be able to compete favourably with English coal in the Eastern markets.

The company's sales for January last amounted to 21,364 tons, and for February to 17,914 tons. At the Queensland Copper property, near Rockhampton, no work is at present being done, and no expense incurred other than that necessary to keep the buildings, &c., in good preservation. At the Cadia properties, in New South Wales, Capt. Holman, the lessee, continues to raise some copper ore, and to smelt the same under royalty to this company. Some prospecting also for gold was about to be set on foot by Capt. Holman and some miners on the spot, who entertain a favourable opinion of a portion of the property for that purpose. Any gold so obtained will, of course, be subject to royalty to this company under the existing arrangement with Capt. Holman. The manager is about to fence in the property at a moderate expense, a step which, he reports, is likely to add to its surface value fully in proportion to the amount so to be laid out upon it. Capt. Holman paying interest on such outlay at the rate of 10 per cent. per annum. The annexed accounts set forth the operations of the company during the six months ending on Dec. 31, 1879, and exhibit its position at that date. The balance of profit shown by the general revenue account (including 5722s. 13s. 3d. brought forward from the previous account) is 23,224s. 4s. 10d. The directors propose the payment of a dividend at the rate of 15 per cent. per annum on the paid-up capital of the company (160,000s.) free of income tax, which will require 12,000s.; to add to the reserve fund (which will then amount to 16,000s.), 5000s.; and to carry forward to next account, 6224s. 4s. 10d., total, 23,224s. 4s. 10d.

The CHAIRMAN, in moving the adoption of the report, observed that the half-year's trade had been good, and the colliery had been kept well employed. If the strike (reported to the shareholders at the last meeting) had not occurred the sales would have reached fully up to those of the previous half-year, but the loss of nearly a month's work had of course proportionately reduced them, and, as a consequence, the colliery profit also. The trade with purchasers in this country had been slack during the half-year, owing to there being hardly any vessels willing to take coal freight from Australia, as there was a large demand for shipping to bring wheat home from South Australia. This state of things might be fairly expected to change soon. The price had not been altered down to Dec. 31 last; and further, until March of this year no change had been reported. About that time the general trade became very slack (although this company's continued good), and the associated masters would appear from what has appeared in the newspapers had broken up their arrangements as to vend, price, and wages. The price was reported as 10s. per ton, but the company's telegraphic advices did not yet make it very clear that that was the price of Lambton coal. In his latest written despatch (dated March 16) Mr. Morehead stated that he felt it very difficult to name a price that could be relied on for any length of time, as when miners' wages came to be reduced (as they must be to meet a fall in price) there might be difficulties at some of the collieries which would have the effect of keeping prices up. He did not anticipate further difficulties with this company's men. Altogether the present state of the trade was rather troubled, but the Australian colonies afforded a tolerably wide foundation for permanent prosperity, and temporary difficulties would again be got over as they had been before. It was prudent, however, to be prepared for fluctuations in colliery profits, and the board, therefore, carried forward a large balance of profit (6224s. 4s. 10d.), which would go a long way to make the next dividend secure. So far as the present half-year had proceeded the company's trade had been good, reaching 51,276 tons from Jan. 1 to March 13. As regards the company's copper properties he might observe of Cadia that Capt. Holman held it on yearly lease, upon a royalty of 1-l0th of copper and 1-20th of gold. The royalty received during the half-year ending Dec. 31 last amounted to 51s. 7s. 7d. from copper. Nothing was obtained from gold. There was an inclination to try the property for gold by some miners in the neighbourhood under Capt. Holman. This would cost the company nothing, and if any gold were found it would pay royalty to the company. Gold was found there before and was likely to be again. The property consisted of over 3000 acres of freehold land, with railway close to it. It was, of course, of some value as agricultural land, but he did not

Mining Correspondence.

BRITISH MINES.

ABERLLYN.—John Roberts, April 23: I have nothing new of any importance to report this week. In the valley cross-cut there are some joints of fine strong lead, which to my mind is quite conclusive that the lode when reached will be found a good one, especially as those lead joints are coming from the direction of the lode. The No. 3 cross-cut is without any change. The stopes are all the same as last week.

ALSTON UNITED.—C. Irving, April 23: We have secured the deep adit level for 245 fms., and laid same with rails complete, in good working order; and are now driving to cut the lodes at their junction through the scar limestone sill. The lodes will be intersected at a depth of about 60 fms. from surface. We have a heavy stream of water coming from the end, so I am of opinion we shall not have far to drive before we get into the lodes, and that they will prove rich.

BELL YEAN.—James Bray, April 23: There is no change in the cross-cut since I wrote you last. There is still a stream of water coming out of the end. I expect to cut something shortly.

BELLOWDA.—Thomas Parkyn, April 23: The men are making good progress in sinking the new shaft on Webb's lode. The lode is still very large, and contains splendid rich work for tin all the length of the shaft, but the richest work is in the eastern side of the lode. The shaft is now down 8 fms. 3 ft. from the surface. At the shallow adit, which is now 20 fms. below the surface of the vein, we have the extreme point of operation, we are driving north on Webb's lode towards the new shaft now sinking, and I am very pleased to say we have cut into the east side of the lode and have taken out rich stones of tin, and a more promising lode I never saw. I find we are 27 fms. south of the new shaft, and this adit will come in 23 fms. below the surface at the shaft, and as the hill still rises going north, we shall soon have 30 fms. of backs laid open to take away, and now we have cut into rich work for tin at the adit, and as the lode is rich in the shaft, I believe we have an immense quantity of rich tin ground to take away as soon as the adit is home, and the shaft sunk and holed to adit—indications warrant this opinion. I have the greatest confidence in the mine being a grand property, as it can be worked by such adits mentioned above, which will save the cost in pumping. There are several east and west lodes that will intersect Webb's a little further north.

BETTWYS-Y-COED.—M. H. Whitford, April 23: I am pleased to report considerable improvement in the 39 east. I have set this end to drive east of the flat-rod shaft, by six men, at 12f. 10s. per fathom. This is the bottom level, and opening a new section of valuable ground, which appears well for the sinking of this shaft. A stop in the back of the 30, west of shaft, is set to two men, at 45s. per load; yielding 10 cwt. of lead ore per fathom. A stop in the back of the 20, east of shaft, by two men, at 5d. per fathom; yielding 9 cwt. of lead ore per fathom. The deep adit end to drive east of the engine-shaft, by four men, at 7s. 6d. per fathom; lode 2 ft. wide, good stones of lead, and a very promising appearance, letting out water freely. A rise in the back of this level, but a short distance from the end, is set to two men, at 30s. per fathom; the lode is 4 ft. wide, and yielding 10 cwt. of lead ore per fathom. A stop in the back of No. 1 is set to two men, at 20s. per fathom; lode yielding 6 cwt. of lead ore per fathom. A stop in back of No. 2 is set to two men, at 23s. per fathom; lode yielding 7 cwt. of lead ore per fathom. A stop in the bottom of the shallow adit level set to two men, at 23s. per fathom; lode yielding 10 cwt. of lead ore per fathom. A stop in the back of the shallow adit level set to two men, at 28s. per fathom; yielding 8 cwt. of lead ore per fathom. I am pleased to state that the prospects of the mine never looked so cheering as they are to-day. The parcel of lead is weighed off and forwarded to-day to Nevill, Bruce, and Co.

BLAEN CAELEN UNITED.—J. Pell, April 23: The stop in back of the 30 is looking exceedingly well. Have put men at 5s. 10s. per fathom, to continue to cross-cut north, opposite engine-shaft. The run of ore (if holds westward) will be found by this cross-cut. Have discontinued sinking below the 30, water being scarce, and have taken the opportunity to repair launders from upper pool, which has leaked for some time in the embankment. The stop in the back of the 20 has lengthened, and shows a good course of ore, but with much mud. The cross-cut driving south to cut Esgair-hir lode, has just reached what appears to be a wall of lode, and I hope next week to report something from this trial.

BLUE HILLS.—S. Bennetts, R. Harris, April 23: The lode in the 42 east end is without much alteration. In the west end it is 2 ft. 3 ft. wide and worth 6d. per fathom. The 30 east end is worth 6d., the rise above this level is worth 12d., and the winze below 25d. per fathom. The 20 east end is producing some low quality tin-stuff. We have commenced pumping out the water from the old mine, and progressing very satisfactorily.

BODIDRIS.—H. Hotchkiss, April 23: Maes-y-Pwll Lode: There is no material change in the 60 east end—still producing strings of lead ore. The 17, east of winze, is slightly better for lead ore to-day, and looks very kindly for further improvement as we advance in this direction. The stop in bottom of this level is without change to notice; we have had some ore stuff to surface from these workings this week, and I hope to have sufficient to re-commence dressing early next week.—Meadow Shaft: There is no change in the character of the ground here; all is going on regularly, but progress in the sinking is slow, owing to the extreme hardness of the ground. The joint in the 45, referred to in my last as coming in from the west in present forecast, has a south underlie, and has caused a disturbance in the north and south lode, which at this place has enlarged to 3 ft. wide; but its direction is still north, and it seems to become smaller as we follow on it, so I have ordered the men to work on the joint west to ascertain what this may be.

CAMBRIAN.—Thomas Glanville, April 24: ESGAIR FFRAITH: Eastern Shaft: This shaft is now sunk to a depth of 20 yards, 2 ft. below the 86 yard level. We have commenced cutting plat, and when this is finished shall begin casing and dividing the shaft in order to draw from the bottom with our large kibble. The lode in the shaft will yield 3 tons of copper ore per yard. The stop in the back of the 85 and 70 yards levels will produce 2 tons each of copper ore per yard. All other points remain much as usual. We have dispatched to Swansea our monthly quantity of copper ore.

CARNARVON COPPER.—John Roberts, April 23: At Garmon's it is forked to the 45. At the new shaft we have been working very slow this week on account of rain, which unavoidably goes into the mine. We have 8 fms. more to get to the bottom of the old works. The pulley stands of the winding-engine, which had gone rotten and fallen down, we have made and put up from the new shaft to Garmon's this week. In the new trial on the western ground the mud is not so wide, but more copper in the lode.

CLEMENTINA.—John Roberts, W. Sandoe, April 23: Monthly Report: At the 34, north of the engine-shaft, we have raised up about 1½ fm. The rise is 2 fms. in length, and the lode poor except in the ends. There being a good lode in the north end we put the men to work there so as to gain it in that direction, that we may be able to rise up in the lead instead of in the poor neck of ground. In the sump at the 15 above this point we have sunk about 2 fms.; the lode has been worth 10 to 15 cwt. per fathom. At the present moment the lead is replaced a little by a large lode, which we look upon as favourable rather than otherwise, as these vagus generally make the lode more productive. At the Roaldale shaft we have taken up the water that was falling from the roof, and carried it back to the shaft, so as to make the bottom of the level convenient for stonking, and have stoned about 3 fms. of ground. After we have put the stope for a little further from the shaft we shall get into better lead ground, and according to appearance in the bottom of the level, we hope that this will assist us very much in our sales of lead. We sample 10 tons of lead this week.

COMB MARTIN.—J. Harris, T. Conner, April 23: The lode in the 17, north-west from Harris' cross-course, is opening out large, and beginning to show itself more settled as we are getting away from the cross-course. We are finding small patches of lead in the hard part of the lode, which we calculate will further improve shortly. In the 17 south-east the lode continues to yield good patches of lead, with blonde and white iron, a very promising looking lode. The lode in the winze sinking below the adit level is a little disordered by a flooky branch or two crossing it, and it is not showing so much quartz as it did, but we are confident it will soon change again for the better; the men are making fair progress with the sinking.

CORNWALL GREAT CONSOLS.—H. Miners, April 27: There is little or no change in the mine since my last report. If there is any difference the lode in the bottom end west and in the winze sinking below the deep adit level to communicate with the same level has improved, though both the points are producing good work for tin. There is no doubt when the communication is effected, which we are pushing on with all possible speed, a valuable piece of ground will be laid open for stonking. The lode in the bottom level, east of engine-shaft, is still large, and letting out a great quantity of water—a very promising lode, and producing tin. The different stopes are looking much the same as in my last report—still producing saving work for the stamps. The men have finished casing and dividing the shaft from surface to the bottom level, and are now preparing to fix bearers and cistern, which would have been almost completed by this time had it not been for the giving way of some timber in the back of the deep adit near the shaft, causing a delay in the work they were about. The carpenter and smiths and other men who are engaged in preparing the work are getting on very well, and we hope shortly to fix the lift, and commence sinking below the present level, when we are fully persuaded from present appearance that in a few fathoms sinking good results will follow. Our surface work is all progressing very favourable, and the machinery is working well. We sold a parcel of tin on Thursday last, and are now preparing another for the market. The mine altogether is looking very promising.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, April 23: We are glad to say that the stopes in the 66 continue to produce splendid lead ore, and driving of the level at this depth we have no hesitation in saying that a valuable body of lead is in close proximity to us, which, when proved, will enable increasing returns to be made. In the 112 east main level we have reason to think that we are close to the productive lodes in the district; at present we are passing through shale and spar, and are now meeting with strong stones of galena, which will assay well for silver, and believe that within a short distance of our fore-breast the productive channel of ground will be found to have settled the lode, and with this change lead should be found in remunerative quantities. The north cross-cut is still jointy and is being urged forward. We have set two tribute pitches, one in the 112 east and the other in the 112 west, and both are yielding good lead ore.—Dressing-Floor: We have had to treat such a quantity of stuff taken from the 66 west, and most of it in clayey ground, that we have not cleared up all the piles of stuff for the lead bin this month, but that which was ready we sold on Thursday—5 tons of blue ore at 10s. 10s. per ton and 5 tons of grey ore at 7s. 10s. per ton; total 14 tons, realising 132s.

DERESBY CONSOLS.—J. Roberts, W. Sandoe, April 23: There seems to be a little improvement in the Cobhier's lode, being water, and a little stronger. All the other points are much the same as reported last week.

DERESBY MOUNTAIN.—J. Roberts, W. Sandoe, April 23: Monthly Report: The pitch at No. 2 has yielded about 4½ tons of lead, and is looking much the same as it has been. In the Gorse shaft we have sunk about 3 fms., and is now down 12 fms. We hope in about a month more this shaft will be completed down to the 15. The part of the lode we are carrying, which is small, has very much changed in appearance, and we have but little doubt that when we get down and cut it through we shall find it to be a good lode, as it is now yielding on the face of it good stones of lead, with a beautiful carbonate of lime matrix. The ground in and about the sump at No. 5, is without any particular change one way or the other. We may repeat that the disadvantages under which we are at now work is the most we have to complain of, but these will be overcome when the 15's completed up to this point, and we fully expect to be able to make

up present delays, for we never felt greater confidence in the future of the mine than at the present moment. We are sampling 20 tons of lead this week.

DERWENT.—John Morpeth, April 26: Setting Report: Jeffries' Shaft, Middle Vein: This vein in the 95 east is 91 fms. from the shaft, is 4 ft. wide, but because of there being an orey flat in the end, we are carrying the level 9 ft. wide, for which width it is worth 27 cwt. of ore per fathom. The two stopes in the back are each 5 ft. wide, and worth together 1 ton 12 cwt. of ore per fathom. The flats on the north side of the vein over this level yield 15 cwt. of ore per cubic fathom. Over the 93, west of shaft, we have three stopes—their respective value being 10, 15, and 12 cwt. of ore per fathom, and average width of vein 4 ft. Over the same level four men are stripping down the sides, and yielding 16 cwt. of ore per cubic fathom.—Sun Vein: The 70, east on this vein was not so orey at the measuring on Friday: vein 2 ft. wide, and worth 11 cwt. of ore per fathom.—a little easier to explore.—Westgarth's Shaft, Middle Vein: Under and over the 93, east of shaft, the several stopes, &c., are yielding 15, 13, 15, 16, 13, 20, 20, 20, and 20 cwt. of ore per fathom respectively, and average width of vein 4½ ft. The cross-cut at the 93 from Westgarth's shaft towards the north vein still goes at about 3 fms. a week; the distance driven last month (five weeks) was 14 fms. 4 ft. It is re-set to the same men for another month at 80s. per fathom. Driven from the commencement 33 fms. 3 ft. 5 in. The rise over the 74 on the junction of the Middle and Burnshieldsburgh vein is now up 8 ft. We are rising principally by the side of the vein, but have cut down a little of it, which is of a very kindly character, composed of fluor, sandstone, a little blonde, and 16 cwt. of lead ore per fathom for full length of rise (9 ft.), but not having seen the north check of the vein we cannot as yet give the full value. We are pushing the several branches as fast as possible.

DEVON (Copper and Blende).—Wm. Skewis, April 23: The adit level is cleared and secured for 203 fms., but in consequence of the air being bad we have suspended the clearing for the time, and put the men timbering or collaring up the engine-shaft, which will be finished and the whole of the arch over the shaft removed by Saturday. When this is done a footway will at once be fixed from the surface to the adit so as to enable the adit to be cleared west from the engine-shaft to communicate with the point at which it was suspended to give ventilation for the working of the ground above that level. I am pleased to say we have found a good lode of blonde and copper in the back of the level, and very fine stones of copper broken from there.

DEVON GREAT CONSOLS.—Isaac Richards, April 23: Wheal Josiah—New South Lode Shaft: In the 130 west the lode is 2 ft. wide, composed of capel, quartz, mundic, and a small quantity of copper ore. In the 115 west the lode is 2 ft. wide, composed of capel, quartz, mundic, and a little copper ore.—Wheal Emma, Inclined Shaft: In Dawes' cross-cut south, at the 190 east, the ground is tolerably favourable for progress.—New Shaft, New South Lode: In the 190 east the drivage is being continued by the side of the lode for more speedily progress. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3½ ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. In the 190 east the lode is 3 ft. wide, and continues very promising, being composed of capel, quartz, peach, prian, mundic, and some copper ore of good quality.—Railway Shaft: At the 190 the ground is rather more favourable, and better progress in cutting of plats is now being made. In the 175 west, east of Barlett's winze, on the north part of the lode, the lode is 3 ft. wide, composed of capel, quartz, peach, and copper ore, worth 1 ton or 3s., and 3 tons of mundic per fathom. 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strongly impregnated with yellow copper ore, which shows that the ground is alive for copper as we advance in this direction.

MORFA DU.—T. Mitchell, April 29: The points in operation here continue of the same value and appearance as noticed in my report of the 26th inst.

NANT RHYS.—Capt. Mitchell, April 24: I am sorry I cannot report a body of ore, but we have as promising a lode as can be seen. I feel confident that it will make rich bunches, and that we shall get them.

NEW CATHEDRAL.—S. Davy, S. Davy, Jun., April 26: The lode in the engine-shaft sinking below the 52 fm. level, is 3 ft. wide, and thickly interspersed with grey, black, and yellow copper ore. The lode in the 52, driving west of engine-shaft, is 2½ ft. wide, and impregnated with copper ore. The lode in this level, driving east of engine-shaft, is also 2½ ft. wide, and producing good copper ore. The lode in each of the above points will be saved and dressed. The two parts of the lode mentioned in our last report are coming together in the 42 driving west just now together. The lode is promising for the production of copper.—Rawson's Lode: We have suspended the sinking of the shaft in consequence of an influx of water. We hope to set tribute on this lode in the coming week.

NEW KITTY.—Wm. Vivian, April 29: We are making good progress with the work in the shaft for erecting the engine. A good 36-in. cylinder engine, boiler, and about 25 fms. of 9-in. pitwork have been purchased from the New Charlotte Mine for the New Kitty Mine. By sinking the engine-shaft about 10 or 15 fms. deeper than the present bottom of the shaft the Wheal Kitty lode will be cut in the shaft, and I have no doubt that a good profitable mine will be opened up for a small outlay.

NEW WHEAL PEEVOR.—W. T. White, April 26: The men are making very satisfactory progress in driving the cross-cut north in the adit level, being six in number, and easy ground for driving, price 5s. per fathom. We shall in a short time reach the end of this depth (25 fms.). We intend extending this cross-cut to intersect all the lodes, which I verily believe will be found productive, being in similar strata to those in Wheal Pever and West Pever.

NORTH D'ERESBY MOUNTAIN.—R. H. Vivian, April 29: The No. 1 adit, driving south-west, is on the footwall part of the lode, now being driven at 90s. per fathom; the lode is full 4 ft. wide, with occasional spots of lead. A part of this lode is on the hanging or east side of the level, and shows a kindly appearance, some few fathoms behind the end. I have put a pair of men in the rise east of cross-cut in No. 1 level; the lode here is large, where I expect to break some more lead. No. 2 adit has been unproductive for the last few fathoms driven. To-day the lode looks more promising, containing more spar. I consider this a good indication. The carpenter will begin to-morrow with the roofing of the smithy shop and offices.

NORTH HERDFOOT.—T. Trelease, April 29: The shaftmen have divided the shaft down to the 14, and we intend to complete it to the 24 before we clear the run to communicate with the footway. The masons are making good progress with the engine-house, and the engineers are taking out the engine, which we hope to begin to bring here soon.

OKEF TOR.—T. Rodda, H. Bulford, April 28: The lode in the winze sinking below the 65 has improved for arsenical ores, and carries more copper ore. The other places in the mine are without change since last report. In making up the number of fathoms driven, stopped, and sunk in winzes during the past month, we find the average yield about 30 tons of arsenical ore per fathom, which carries it a good mixture of copper ore.

PANDORA.—H. Nottingham, April 28: New Lode: Engine-Shaft: Fair progress is being made in sinking the shaft, being now 5 fms. 4 ft. below the 33, the lode has been yielding very good stones of lead during the past week, and looks very kindly. The 23 Fm. Level: This level going south is looking rather better; producing more lead. The back we are leaving behind us will pay for stopping away, and I believe we have a better lode above us here. I am now daily expecting to meet with the break and throw of the lode, which makes the No. 2 run of ore. No. 1 stope, south of winze, over this level, is worth fully 1½ ton of lead and 1 ton of blende to a fathom. The 23 Fm. Level: No. 2 stope over this level is worth 15 cwt. of lead and 25 cwt. of blende to a fathom. I am arranging to start a stope between this and the end of the level, which is worth 1½ ton of blende and a mixture of lead to a fathom.—Goddard's Lode: In the 33 fm. level south the lode is very irregular and disordered at present, but I look for an improvement, as we are nearing the line of No. 2 run of ore ground. The stope opposite the shaft cross-cut is suspended, as we cannot work it conveniently at present. We shall resume stoking the back of this level as soon as the end is communicated with No. 2 winze south. The 23 Fm. Level: The stope, south of No. 3 winze, under this level, is worth 12 cwt. of lead and 15 cwt. of blende to a fathom. Dressing and other surface work is progressing satisfactorily. Samples have been sent out of 25 tons of lead and 25 tons of blende, for sale at the usual time.

PANT-Y-MWYN.—Enoch Parry, April 29: We have taken down the old pit-head, and put up new, with a 7-ft. gallery on Modlyn shaft, and have arranged and fitted up the top of the shaft, and are now putting in partition, &c., near the bottom level. Good progress is being made with the work, and at the end of this week we shall be in order for winding with the large kibbles, and at a good speed, which is an important advantage at any mine, and especially with a loose lode like ours. The shaft is sunk 7 ft. 6 in. below the 15; the lode is large and kindly, containing a little lead ore. In the 15 end, driving east of the shaft, the lode has improved in the week from occasional stones of lead ore to be worth 1 ton per fathom. The stope, east of Griffith's shaft, is worth 1 ton per fathom. We have the four men from the south shaft sinking Modlyn shaft while the shaftmen are doing other work, but shall put them back to it again shortly.

PARYS COPPER CORPORATION.—T. Mitchell, April 26: Setting Report: The 90 cross-cut south by eight men, at 12s. per fathom, we expect shortly to cut another lode in this direction. Having opened out a little east and west on the lode recently cut we find it worth about 3 tons of copper ore per fathom, but our object at present is to push on the driving south, in order to prove the ground standing in this direction. The cut to drive east of cross-cut, towards Colonel's shaft, by six men, at 3s. per fathom; we have about 10 fms. more to drive to get directly under Colonel's shaft. We have set two tribute pitches to twelve men, at the usual prices, and we estimate the raisings from these pitches for the month at about 50 tons. We are pushing on with clearing up the water and stuff at Colonel's shaft with all speed.

PATELEY BRIDGE.—D. Williams, April 29: Setting Report: The 90 cross-cut south by eight men, at 12s. per fathom, we expect shortly to cut another lode in this direction. Having opened out a little east and west on the lode recently cut we find it worth about 3 tons of copper ore per fathom, but our object at present is to push on the driving south, in order to prove the ground standing in this direction. The cut to drive east of cross-cut, towards Colonel's shaft, by six men, at 3s. per fathom; we have about 10 fms. more to drive to get directly under Colonel's shaft. We have set two tribute pitches to twelve men, at the usual prices, and we estimate the raisings from these pitches for the month at about 50 tons. We are pushing on with clearing up the water and stuff at Colonel's shaft with all speed.

PEN-Y-GRON.—E. Jones, April 27: The Rake vein, in the 30 east, is 3 ft. wide, between well-defined walls, composed chiefly of gossan quartz, with occasional stones of ore. In the cross-cut to intersect Fielding's vein we are continually meeting with branches of spar with spots of ore, which doubtless are flyers off the vein in advance. The 20 west is not driven by a full part of men as a cross cut to intersect the Shale, Lord Howe, and Cleaver veins. The tribute pitches throughout the mine are yielding ore in paying quantities.

PENHALL.—S. Bennett, R. Harris, April 24: The lode in the 80 east end is without much alteration; it contains a small quantity of both tin and copper.

In the west end it is divided in three parts near a gossan and cross-course, and is unproductive. In the 70 west end the lode is 1½ ft. wide, yielding low quality tinstuff. In the 70 east end there is no change to notice. In the 60 east end the north part of the lode contains a small but good leader of tinstuff. In the 50 west end the lode is worth 6s. per fathom, and the 40 west is worth 6s. per fathom.

PENNANT.—April 29: The 30 seems to be forming into a fine and compact lode; it is now the full width of the level—4 ft., composed of killas, carbonates of barites, lead, and blende ores; the part passed through would turn out about 2 tons of lead per fathom. To-day I took out solid loose lumps of lead, and I should say we must be nearing a great deposit. We have never had anything so promising as this level since we commenced operations at the mine. All the stopes look well, and amongst the carbonates we find more lead than ever before; we are looking very well, which will be pleasing news to all our shareholders.

PEN-Y-ORSEDD.—April 29: The engine-shaft is being sunk with eight men, and progressing very satisfactorily; the ground through which we are passing is of an exceptionally fine character. The north cross-cut seems in the most productive bed of ground, and we look forward to cutting the Hendre lode quickly, which has yielded thousands of tons of lead at the mines bearing its name, and we expect to be equally fortunate in making returns therefrom. Our general progress is highly satisfactory, and prospects excellent.

PHENIX AND WEST PHENIX.—John Truscott, H. Harvey, J. Hosking, April 29: We beg to hand you the following setting report:—The 224 to drive east of Secombe's shaft by the side of the lode, by six men, at 21s. per fathom. A cross-cut to drive south at the 200, west of old sump shaft, by two men, at 9s. per fathom. To strip out the lode in the 140, west of old sump shaft, by four men, at 4s. 6d. per ton; worth for tin per cubic fathom 8s. To strip out the lode in the 130, west of old sump shaft, by four men, at 5s. 6d. per ton; worth per cubic fathom 6s. No. 1 stope in the back of this level, by nine men, at 3s. per fathom; lode carried 14 ft. wide, and worth 40s. per fathom. No. 2 stope in the back of the same level, by six men, at 3s. per fathom; lode 21 ft. wide, and worth 30s. per fathom. To strip out the lode in the 120, west of old sump shaft, by four men, at 5s. 6d. per ton; worth per cubic fathom 6s. The stope in the back of this level, by six men, at 4s. 6d. per ton; lode 19 ft. wide, and worth 10s. per fathom. To strip out the lode in the 110, by six men, at 4s. 6d. per ton; worth per cubic fathom 6s. To strip out the lode in the 100, by six men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 25s. per fathom. To drive the 100 west on the north or gossan part of the lode, by two men, at 22s. per fathom. The No. 1 stope in the back of this level, by six men, at 2s. per ton; lode 21 ft. wide, and worth 30s. per fathom. The 90 west of new engine-shaft, by four men, at 5s. 6d. per ton; lode 9 ft. wide, and worth 30s. per fathom. To strip out the lode in the 80, west of new engine-shaft, by four men, at 5s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. The No. 1 stope in the back of this level, by four men, at 2s. per ton; lode 21 ft. wide, and worth 30s. per fathom. To strip out the lode in the 70, west of new engine-shaft, by two men, at 5s. 6d. per ton; lode 9 ft. wide, and worth 30s. per fathom. The 60 west of new engine-shaft, by four men, at 5s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 50, by four men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 40, west of new engine-shaft, by four men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 30, by four men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 20, west of new engine-shaft, by two men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 10, west of new engine-shaft, by two men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 0, west of new engine-shaft, by two men, at 4s. 6d. per ton; lode 12 ft. wide, and worth 30s. per fathom. To strip out the lode in the 10, east of Stow's shaft, by two men, at 3s. per fathom; lode 9 ft. wide, and worth 30s. per fathom. To strip out the lode in the 0, east of How's shaft, by two men, at 3s. per fathom; lode 9 ft. wide, and worth 30s. per fathom. No. 1 stope in the back of this level, by two men,

at 3s. 10s. per fathom; lode worth 30s. per fathom. No. 2 stope in the back of this level, by four men, at 2s. 15s. per fathom; lode worth 10s. per fathom. To strip the back of the 40, east of Stow's shaft, by four men, at 3s. 2s. per fathom; lode worth 7s. per fathom. Six tribute pitches in the eastern part of the mine were set at tributes varying from 5s. to 12s. 4d. in 11. for tin and copper.

POLROSE.—W. Bennett, C. Roach, April 28: We continue to make good speed with the sinking of the engine-shaft below the 80, which is now down 5½ fms. below that level. The ground in the engine-shaft appears to be changing to a lighter killas, which we think a very favourable change if it continues, as this kind of ground is most congenial for making mineral. We are also making good progress in the rise above the 80.

POLROSE.—W. Bennett, C. Roach, April 29: Since writing our report yesterday we are glad to inform you that we have broken some good stones of tin from the engine-shaft. This tin is very much like that found on the Margaret lode, in the 80, west of shaft.

PORT NIGEL.—J. W. Manley, April 29: Setting Report: The 68 fm. level to drive east by six men, at 6s. 10s. per fathom. The lode is undergoing a change and is now yielding saving work for the dressing-floors. More water is being continually cut in this end, and I shall put in four men to rise in the back of this level (the 68 east) on Monday next. This rise will ventilate this part of the mine, and I expect will open out some good stoning ground. The 58 east to drive by four men, at 3s. 7s. 6d. per fathom; lode producing saving work, and an early improvement is expected. No. 1 stope, in back of 58 east, by two men, at 5s. per fathom. This stope will be finished in a few days. No. 2 stope, by four men, at 3s. per fathom, producing about 15 cwt. of lead ore per fathom. No. 3 stope, by four men, at 3s. 6d. per fathom; lode producing 20 cwt. of lead ore per fathom. The 58 east to drive west, by four men, at 5s. 5s. per fathom. We have four men stripping down the lode in the run. The lode is poor, but I am looking for this point to improve as we approach the bottom of the 40. The cross-cut to drive north, by four men, at 5s. 5s. per fathom. We are shipping the 40 tons of lead ore sold to Messrs. Nevill, Drury, and Co., and pushing on with the dressing for another parcel for sale at the usual time.

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PRINCE OF WALES.—J. Andrews, April 28: The ground in the deep adit cut is rather spare for driving. The engineers are progressing favourably with heating in the engine. The main bob in its place, and if things go well the engine will be ready to work in four or five weeks from this time.

ROMAN GRAVELS.—A. Waters, April 29: The lode in the 110, north of new shaft, is getting wider and more promising as it has been for some time past. The 95 cross-cut, going south-west from old shaft, has improved, and is (to-day) worth quite 1½ ton per fathom. The 65 cross-cut west, going through the great spar lode, has let down some water to-day, and the lode seems to be changing in character for the better as we go forward. One of the stoves in the back of the 80, north of old shaft, and the stoves in the back of the 65, south of new shaft, have improved in value since last week. The other points are as last reported.

SOUTH CONDURROW.—W. Rich, W. Williams, H. Abraham, April 28: The lode in the 93 end east is worth 12s. per fathom. The 80 east is worth 12s. per fathom for tin, and looks likely to improve. The 80, west of Plantation shaft, is worth 10s. per fathom. The 70, east of cross-cut, in the 80, is worth 8s. per fathom. The 65 cross-cut south, in the 70 cross-cut south, and good progress is being made. The winze in the bottom of the 70 west is worth 9s. per fathom. The 70 end west is improving, and is now worth 10s. per fathom for tin. The copper lode in the 70 north is yielding some fair quality copper, and has a kindly appearance; but, as it is still intermixed with the tin lode, we can hardly yet work definitely as to its size or value. The 70 end, east of King's shaft, is worth 8s. per fathom. The 60 east yields a little tin. The 50 east is worth 12s. per fathom. The rise in the back of this level is worth 15s. per fathom. The 40 end east is worth 9s. per fathom.

SOUTH DA'BREN.—H. Andrews, April 29: There is nothing very new in this mine to report since last week. We are in course of fixing skip-road, which will soon be completed to bottom. The 110 east is in a large mixed lode, worth 10s. per fathom for lead and copper ores. The drawing and dressing is regularly pushed forward with the assistance of the engine, the supply of water is not enough to carry on by itself.

SOUTH D'ERESBY.—W. Bennett, April 29: The lode in the north end is at present the leader, and this is what we expect to be coming from a stope of ground, but which, from present appearances, will decrease again. In the 16, driving north-east, there is no particular change to notice since last reported.

TAMAR.—R. Goldsworthy, April 29: Saturday last being pay and setting, when the following bargains were let:—To drive the 37 south, by four men, at 7s. per fathom; the lode is 4 ft. wide, producing 4 cwt. of silver-lead and 3 tons of fluor-spur per fathom. To drive the 27 south, by six men, at 7s. 10s. per fathom; the lode is 2 ft. 6 in. wide, and well defined, composed of capel, quartz, spathes, iron, mica, and spots of lead. Judging from its promising appearance, it can scarcely fail as the end is extended to lay open some valuable ground. The winze in this level has been communicated with the 27, which has greatly improved the ventilation of the mine. Four tribute pitches, by eight men, at 9s. per ton for silver-lead, 15s. and 8s. per ton for fluor-spur.

TANKERVILLE.—A. Waters, April 29: There is no change worthy of remark in the mine since my full report last week. We have to-day sold 70 tons of No. 1 quality lead ore for 72s. 10s., and 15 tons of No. 2 quality for 12s. 15s.: total, 57s. 5s.

TEESDALE.—J. Slack, April 22: West End Forehead: I am glad to say there is a better improvement in the quantity of lead ore setting on in the roof between two good checks. It is red and mineral like and is likely to continue to the east cheek. It looks better than it has done for a long time.—No. 2: There is no change to report from the working. It remains poor and hard, but not poor enough to leave off working.—No. 3: I think the vein substance has grown a little narrower towards the south end, but there is lead enough in it to continue working. I expect to be able to set on another stope next week. Dressing has commenced again with the house. There is a great quantity accumulated. They have been altogether on with the sludge this last fortnight.

TYN-Y-FRON.—E. Jones, April 27: The blade is still holding up in the stope as good as ever, but as our place is now so full of ore stuff we are preparing the ground to lay on rails, and extend the road to the stope, which will enable us to get to the picking place quicker and at less cost than wheeling. I think we shall have a good place, probably, as the weather is now favourable.

WEST ASHETON.—Josiah Garland, April 27: The 70 rise was put up last month 5 fms. 1 ft. 3 in., and holed to the 60 fm. level; the ventilation in the 70 west is now good. The lode has not been taken down for the last 3 fms. rising; it will now be cut through and driven on at the most productive point in the rise. The 60 west was driven in the last week in the month 4 ft. 2 in.; the lode has not yet been taken down. The 60 west of Hunt's cross-cut was driven 1 ft. 4 in.; the ground has become very hard and spare for driving, and a good deal of water issues from the foreheads. The lode in the stope in the back of the 50 is 2 ft. wide, and yields 2½ tons to the fathom. The 40 west was driven 1 fm., the lode is 1 ft. wide, and yields stones of lead ore occasionally. No. 4 stope, in the back of this level, yields at present 3 tons of lead per fathom. No. 5 stope, east of foot-way rise, yields 1 ton per fathom. The 1 stope, in back of the 30 west, is poor, and yields about 5 cwt. of lead ore per fathom. No. 6 stope, in the same level, yields about 10 cwt. of ore per fathom. Gudriva's iron, in back of the 30, was put up 5 fms.; the lode is about 6 in. wide, and with ore out. All the preliminary work having been completed, the sinking of the boundary engine-shaft, through the 60, was commenced yesterday. The new winding-engine will be ready to work in the course of this week.

WEST ASTHON.—N. Richards, April 29: In the 38 west, on Vivian's north lode, and a little to the east of our present working at the 50, we find a lode that will yield about 1 ton of copper ore per fathom. This level is being full of all the stopes in the mine to

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The Mining Market: Prices of Metals, Ore, &c.

METAL MARKET—LONDON, APRIL 30, 1880.

IRON.	£ s. d.	£ s. d.
Pig, smt., f.o.b., Clyde...	2 7 0-2 7 1½	
" Welsh, all No. 1 ...	2 9 0-	
" Welsh, f.o.b., Wales ...	5 15 0-	
" ... in London ...	6 5 0-6 10 0	
" ... St. ...	7 10 0-8 00	
" ... in Tyne or Tees ...	6 15 0-7 00	
" ... Swedish, London ...	10 10 0-	
Rails, Welsh, at works ...	6 0 0-	
Sheets, Staff., in London ...	10 0 0-	
Plates, ship, in London ...	9 0 0-	
Hoops, Staff., ...	9 0 0-9 10 0	
Nail rods, Staff., in Lon ...	8 0 0-9 0 0	
STEEL.		
English, spring ...	18 0 0-19 0 0	
" cast ...	30 0 0-40 0 0	
Swedish, ing. ...	15 0 0-	
" forg. ham.	16 0 0-	
LEAD.		
English, pig, common ...	16 7-16 10 0	
" L.B.	16 15 0-	
" W.R.	17 0 0-	
" sheet and bar.	17 0 0-	
" pipe ...	17 15 0-	
" red ...	18 15 0-	
" white ...	25 0 0-	
" patent shot ...	19 0 0-	
SPENCER.		
Spanish ...	16 0 0-15 5 0	
NICKEL.		
Metal, per cwt.	15 0 0-16 0 0	
Ore, 10 per cent, per ton ...	20 0 0-25 0 0	
QUICKSILVER.		
Flasks, 75 lbs., war.(nom) ...	8 15 0-	
SPELTER.		
Silesian ...	19 15 0-20 0 0	
English, Swansons ...	21 0 0-	
sheet zinc ...	24 10 0-24 15 0	

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is not very much change in the position of the metal trade. Some slight fluctuations have at times taken place in prices, but on the whole the markets have been steadier, and business has mostly been transacted at slightly improved prices. The prevailing opinion appears to be that about the minimum of the markets has been reached. There may, however, still be fluctuations for some little time before the markets become thoroughly settled and assume a higher position; but one thing is certain, that whatever the changes may be which the markets have to undergo before they become perfectly steady, they are already at an extremely low point, and upon this ground alone they are deserving the special notice of bona fide investors, consumers, and shippers. The recent reaction has naturally somewhat shaken the confidence of buyers, but although the markets have suffered temporarily from the realisations which have taken place, yet there is no fear in the minds of impartial observers but what in a very short time they will right themselves, for the prospects, if not brilliant, are decidedly of the most encouraging nature, and as the year advances business may be expected to increase and expand in the most satisfactory manner. Low prices are always attractive, and in the present case an investment in metals is one of the greatest and best securities that an investor could possibly have. Consumption is always stimulated at a period of low prices. The markets abroad also at such times are supplied in much larger quantities, and the requirements of the whole trade are on a more extended scale. Speculators, too, are fully alive to the advantages and safety of purchasing at cheap prices, but not only is the whole buying power stimulated and increased, but there is a tendency on the part of producers to curtail production until fairly moderate prices can be obtained.

It is not improbable but that even next week we may see a general improvement in the position of our markets, for the statistics for the various metals for this month will then be published, and if they prove favourable, as seems to be expected, it is not unlikely but that it may be the starting point of another season of activity, for prices have now been reduced to an enormous extent, and much more than is usual during an ordinary reaction, and further than this, in a general way the month of May is noted for being the most active month for trade in the spring quarter, and as advices from most countries this year are more satisfactory than they have been for many years past it is but reasonable to look for a month of marked commercial activity, and this opinion is confirmed by the recent comparatively limited quantities which have been shipped to all countries except America. Speculators just now are quiet, and bona fide traders have consequently a good opportunity to place their orders on extremely reasonable terms. Confidence for the time being has been shaken, and requires to be restored, but nothing is more conducive to its restoration than a reduced scale of prices, cheap money, and the construction of a Government whose policy is peace, economy, and the amendment of trade and all industrial pursuits.

COPPER.—Before commencing our copper article this week we apologise for an error which appeared in the last two Journals in the quotations for Wallaroo and Flat Bottoms, the price of the former having been quoted against that of the latter, and vice versa. This market has been decidedly steadier this week, and it seems that the downward course of prices has been arrested, and quotations are now somewhat higher than they were last Friday. At times, however, the movements of the market have been irregular, and doubts have occasionally been expressed as to the genuineness of the improved tone, but on the whole a confident feeling appears to prevail. Considering the heavy fall which has taken place during the last two months a rebound must most assuredly sooner or later take place, and various opinions are being given as to how the revival will at first show itself. Some look for a sudden rally, others anticipate the improvement to make a gradual growth; but, whichever way the rally does take place, it matters little providing prices are not pushed up beyond what bona fide traders can afford to pay.

A great drawback to the progress of the trade is the very heavy stock, and should producers wish to realise higher rates they must keep their supplies

within the requirements of the trade, and if for a few months they were to considerably reduce the supply they would find prices very much higher than at the present time. The deliveries are extremely satisfactory, and, therefore, it would not take long with a limited supply to reduce the present stock. The next charters are looked forward to with some interest, and if they are light can hardly fail to produce a most healthy feeling over the whole trade. There are many operators merely waiting for some satisfactory intelligence to arise before renewing their purchases, and light charters will probably be sufficient temptation to cause them to make fresh contracts, and sellers will doubtless soon be able to realise much higher figures than are now obtainable. The prospects are decidedly encouraging, and if holders can stand out a short time longer against the fluctuations caused by forced selling there can be but little doubt that they will hereafter obtain sufficiently profitable returns to make full amends for any sacrifices they may now have to make on account of charges.

IRON.—There has been very little business transacted in our market this week, and buyers are now able to purchase at cheaper rates; but as yet prices have not fallen for manufactured in proportion to those for the raw material. Shipments from the various ports except London are stated to be satisfactory, the chief of which continue still to be made to America. The comparatively low rates now ruling make many dealers anticipate a sudden rebound shortly taking place, and they are strengthened in this opinion by their holding many orders for speculative account. The great stumbling-block to the progress of the trade is evidently the unfavourable news which is constantly being received from America, showing that buyers on that Continent are very loth to make fresh purchases; but it is not improbable that the reduced rates may soon induce Americans as well as other buyers to again come forward, and if our makers can hold out a little longer it is quite possible that they may receive sufficiently large orders to keep their mills in constant and active employment for some time to come. The reports from America show that the quietude has lately been more pronounced, and the demand for all descriptions has diminished much more than could possibly have been expected a month or two ago, and contracts can now be effected only at considerably reduced prices. For Scotch pigs the market keeps decidedly dull, and although the output is relatively good, yet there is a marked falling off in both demand and price. The price for Coltness and Eglington has received \$2, Gartsherrie $\frac{1}{2}$, and Glengarnock remains nominally unchanged. There is a very limited business indeed being transacted in hemite pigs, and buyers all appear to have their immediate wants satisfied. Scrap iron and rails are very dull sale, and inquiries become daily less numerous. Scrap has fallen in value $\frac{1}{2}$, while rails have received $\frac{1}{2}$, the former now being quoted at \$35, and the latter at only \$30. The advices from Middlesborough are unsatisfactory, and report the trade, although occasionally to have manifested a slightly better tone, to be in a most depressing condition, and prices show a marked reduction on the previous week.

The reduced rates in this district do not stimulate the demand, and the amount of business that is being transacted is extremely limited. There is, however, one very good feature to be noted in the position of the trade in this district, and that is the repeated reductions which are being made in public stocks. The reduction for this week being no less than 413 tons. Second-hand parcels of No. 3 are offering at 37s. to 38s. net, but makers are quoting somewhat higher figures. Shipments last week were larger, being over 31,000 tons of manufactured and pigs; and notwithstanding the unfavourable reports which are being received from the United States, the exports of crude iron last week to that country were about 11,000 tons; the shipments, however, were chiefly in completion of old orders, and, consequently, the local trade of the district cannot be reported to have at all improved during the week. As regards the manufactured trade, the various mills are said to be actively engaged, but fresh orders come to hand slowly. Prices vary considerably, owing to second-hand buyers offering iron under manufacturers' rates. The official quotation for bars and angles is about 6s. 10s., while ship-plates are quoted 7s. 10s. to 7s. 15s. per ton. The Sheffield market is said to be in a rather unsettled condition, on account of recent operators pressing sales, and offering iron at rates below makers' quotations. When the active demand was so prominent a short time back manufacturers took every measure to increase their output, so as to meet the extra requirements of the trade, but consumers now finding the reaction continues hold back their orders, and makers have, consequently, had to limit their supply. The Wolverhampton market is said to be depressed through a pressure of sales, and prices, consequently, tend in favour of the purchaser. Sheets are nominally quoted at 9s., though a few orders are reported to have been placed at 10s. per ton below this figure.

A few of the American houses are negotiating contracts for finished iron, and there are still some large orders in hand for shipment to that country. There is little business only being transacted on the Birmingham market, and prices tend downwards. Some of the East Indian, Russian, and Australian merchants are thought to hold large orders; but they are at present holding them off the market, in anticipation of being able hereafter to place them on more advantageous terms. Makers, however, state that have sufficient orders on hand for the present to keep their mills regularly employed. The Welsh makers report having their mills still actively engaged, in spite of the lull in the present demand; and hopes are entertained that the orders in hand will keep the various works constantly engaged until a revival again sets in the demand, so as to prevent any of the plant being stopped which has recently been put again in operation. Quotations are nominally unaltered, though some makers are quoting at slightly lower rates. Makers appear confident of an increased colonial demand, which is expected to sufficiently improve to make amends for the falling off in that for America. Clearances last week are said to have been very large, the chief quantities being exported, as usual, to the United States. Other countries have also taken large quantities, so it is thought that the improvement in shipments is general. The opening price of Scotch pigs on Monday on the Glasgow market was 45s. 7d., but the tone gradually improved, and a good business was reported up to 46s. 10d. cash. On Tuesday, owing to extensive transactions taking place, up to 47s. 6d. was quoted, closing at 47s. 3d. At the opening of the market the improved tone continued on Wednesday, and 48s. 6d. was touched; but at the close the market receded again to 47s. 6d. Yesterday the tone at the commencement was weak, and 46s. 7d. was touched; but the market rallied again to 47s. 6d., but afterwards 47s. was accepted. To-day the market has been steady at about the closing quotation of yesterday.

SHIPMENTS—FOREIGN AND COASTWISE.

For the week ending April 24, 1880 Tons 16,279
For the week ending April 26, 1879 11,795
Total from Christmas to date: 1880. 1879. 1878. 1877. 1876. 1875. 256,349 160,448 124,262 136,727 140,122 176,040
Furnaces in blast at date: 1880. 1879. 1878. 1877. 1876. 1875. 114 87 91 110 118 119
Imports of Middlesborough Pig-Iron into Grangemouth: For the week ending April 24, 1880 Tons 2,750
For the week ending April 26, 1879 1,880
Decrease on 1879 14,603
Stock in Connal and Co.'s Glasgow Stores:—April 24, 1880, 436,755; Christmas 1879, 415,625; Christmas 1878, 199,417 tons.

TIN.—At the commencement of the week this market displayed a decidedly downward tendency, but an improved feeling has been noted during the last day or two, and prices now close at about the same figures as were quoted last Friday. On Monday 7s. 10s. to 7s. 15s. was officially quoted, and on Tuesday 10s. less was accepted. On Wednesday the market having opened at 7s. 8d. a large business was transacted up to 7s. 5s. closing at the higher quotation. Yesterday the market further advanced upon considerable purchases, and up to 8s. to 8s. 10s. was paid various cash prompts. To-day a good business is reported up to 8s. 15s. cash. This metal, like all others, has, during the last two months, undergone a serious fall, but, as seen above, the recovery has already commenced, and it is thought that prices will continue to be maintained, as buyers have no hesitation in paying the advanced rates.

LEAD.—This market is without alteration; prices are easy, and comparatively very little business is being transacted from day to day. The shipping trade is especially dull, and at present shows no signs of recovery.

SPELTER.—Prices for Silesian are maintained, but sellers of English hard appear willing to make concessions to secure orders. It is somewhat remarkable the great falling off that has taken place in the shipments to the East during the last six months.

STEEL.—There is no material change in the position of this market; the advices which come from America continue to produce a most detrimental effect.

TIN-PLATES.—This market continues unsettled, and prices irregular. It is reported that the Welsh makers purpose reducing the production by one-sixth, which would diminish the monthly make by about 60,000 or 70,000 boxes. The exports for the first three months of the year are said to be 49,676 tons, against 43,056 tons in the corresponding period of 1879, and 34,362 tons in 1878.

QUICKSILVER.—This is not in much demand; the official price is 6s. 15s., and second-hand parcels are obtainable at 6s. 12s. 6d. A fresh importation of 600 flasks from New York is advised.

Messrs. PIXLEY and ABELL.—GOLD: The only arrivals of gold this week have been 79,000 oz. per Peninsular and Oriental steamer Khedive, and 15,600 oz. per royal mail steamer Nile (delivered this day); the export demand was sufficient to absorb the former; 125,000 Sovereigns have been withdrawn from the Bank; of these Mendigo took 60,500 to Bombay and 20,000 to Calcutta. There is at present no enquiry for bar gold.—SILVER: The arrivals since our last circular have been very limited, being only 25,000 oz. per royal mail steamer Nile, and about 12,000 oz. from Hamburg; the silver per Nile was sold yesterday at 51s. 1d. per oz. standard. The market is, however, firmer to-day, there being buyers at 52s. 1d. per oz. standard, owing to higher quotations of Exchange from the East and to the great scarcity of bars. The shipments per Nepaul were—20,000 to Bombay, 10,000 to Galle, 20,000 to Calcutta, and 15,000 to Shanghai.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of our Journal.

GAS SHARES.—The principal business in these shares, according to this evening's report of Mr. W. L. Webb, of the Stock Exchange and Finch-lane, has been in Bombay, 6 to 6½; Continental Union, 19½ to 20½; ditto Fire, 15½; ditto 24%; new 13; Gas, A, 17½ to 18½; C, 10 per cent. profit, 21 to 21½; E, 10 per cent. profit, 21 to 21½; 5th Issue, 17½; 7 per cent. max., 13 to 13½; Imperial Continental, 18½ to 19½; London, 17½; Monte Video, 15½ to 16½; Rio de Janeiro, 27 to 27½; San Paulo, 12½; South Metropolitan, B, 18½; Monte Video, 50 to 50%; Oriental, 7½ to 7½; new, 5½ to 5½; 1879, 17½. Gas stocks firm. For closing prices see list on last page of Journal.

INSURANCE SHARES have, according to this evening's report of

Mr. W. L. Webb, of the Stock Exchange and Finch-lane, been dealt in as follows:—Commercial Union, 19½ to 19½; Eagle, 5½ to 6½; Guardian, 68½ to 69½; Phoenix, 302 ex div.; Imperial Life, 302 ex div.; ditto Fire, 15½; Marine, 55½; North British and Mercantile, 48½ to 49½ ex div.; London, 63 to 64½; Ocean Marine, 6½; Universal Marine, 12½ to 12½; Rock, 2½ to 3½; Provident Law, 6½ to 7. Insurance shares are steady. Little business doing, but market firm. For closing prices see list on last page of Journal.

Very little change has taken place in the MINING SHARE MARKET since our last, and the dealers have been chiefly occupied in the settlement of the fortnightly account. Owing to the unsettled state of the metal markets share business has been dull for some time past, but a revival is confidently looked for in both, and the share market closes decidedly stronger and better this week, especially for tin mines.

TIN.—The standards for ore were again reduced in Cornwall on Monday, and this time 47. per ton, making 20. per ton since January, and although this serious drop has affected business and put a stop to a great deal of speculation, quotations remain, as a rule, better than they were in January, when the standard for ore was 20. higher (allowing for fluctuations) than it is now. This looks as if there was still confidence in the tin trade improving after all its speculative features have been removed.

A comparison of some of the prices of tin shares in January last with those given now may be, therefore, of some interest at the present moment. Carn Brea in the beginning of January were 80 to 85, now 87½ to 90; Dolcoath were 60 to 62½, now 57½ to 60; East Pool were 22 to 23, now 33 to 35; South Condurrow were 12½ to 13, now 10½ to 11½; South Frances were 11½ to 12, now 18 to 19; West Frances were 12 to 13, now 16 to 17; West Bassett were 12 to 13, now 19 to 20; Wheal Grenville were 4 to 4½, now 9 to 9½; Wheal Peever were 22 to 23, now 28 to 30; Tincroft were 17 to 18, now 18½ to 19½; Cook's Kitchen were 3 to 3½, now 7½ to 8½; there is an improvement here in a wine below the 320 east, lode worth 100. per fathom, Polrose, 2½ to 2½; there is an incoming into the shaft here, and the prospects are very encouraging. South Cro

are all looking very well. No. 14 is much improved in the south-western end; No. 13 chamber is also much improved in the southern end. On the whole there is a decided improvement in all of the chambers. The furnaces are doing good work, and smelting large quantities of ore.

Ruby and Dunderberg, 9 $\frac{1}{2}$ to 9 $\frac{3}{4}$; the returns from drivings are paying cost and leaving a large profit. The cross-cut at the 300 ft. to intersect the discoveries already made in the 400 ft. and 500 ft. is a most important point. The driving the 500 ft. cross-cut to intersect the Home Ticket and other known deposits is the great feature now looked forward to. The general prospects of the mine are considered better than at any former period in its history.

The Market for Hydraulics or Gold Washing Shares has presented no feature of interest during the week. Now that the warm spring

rains have set in on the Pacific coast the mines are very busy, and satisfactory runs may be anticipated from those companies represented here. In America the dispute between the miners and the farmers is again attracting attention; and one writer says:—“Mining has been carried on so energetically and so recklessly in California and Colorado during the last years that there is great danger of blocking up and diverting the rivers—notably the Sacramento, the Bear, and the Yuba.” By the hydraulic system of washing the crushed rock enormous quantities of detritus have been carried into the streams, and, according to a recent report, it is absolutely necessary to provide some means of catching and retaining the sand and gravel, in order to prevent the streams forsaking their beds and flowing over the cultivated land. So great is the danger that it is proposed to prohibit what is known as hydraulic mining.” It is scarcely necessary to state that this is an exaggeration. What is proposed to do is not to prohibit hydraulic mining, but to prevent the miners damaging and in some cases wholly destroying their neighbours’ property by covering valuable agricultural land with mining debris which converts it into a barren waste. But prohibiting the discharge of the debris into the rivers is really not a much greater hardship on the miners than was the prohibition of the discharge of the poisonous mother liquors and other refuse from chemical works into the rivers at home, and it is not improbable that just as the British legislation taught British chemists to turn the waste liquors to commercial advantage, so the American legal decisions and legislation will teach hydraulic miners to utilise their debris. That the pollution of the rivers and destruction of agricultural land will be prevented is beyond question, so that the utilisation of the debris is a matter to which all interested in hydraulic mining should at once turn their attention.

At Blue Tent they are washing night and day at their South Yuba claim with ample water. Birdseye Creek, $\frac{1}{2}$ to 1; a blast of 400 kgs of powder has been made with good results, and the agent reports steady rains.

Missouri Lead, 10 to 11; the report received from the mines this week, dated April 8, states as follows:—“St. Clair Mine is drained. In a level driven north at a depth of 250 ft. the lode has yielded very largely; in the end of this level the lode is worth 3 tons per fathom. In a rise over the level we find the lode still richer. At the same depth we have a level running south toward Master shaft, with the lode worth 2 tons per fathom; the ground is very soft, open, and easily worked. In the 170 ft. level the ground is improving, and yielding fully 2 tons per fathom. The pump and machinery give entire satisfaction: in two or three days we can put 25 more men to work drifting and stoping. We have now very rich ground opened up; some of the levels have yet to be put in order, which will take a few days only; we can then go on raising ore steadily in large quantities.

In Lead Mine shares there is really scarcely anything doing, and prices are altogether nominal; it is hoped, however, that lead has now reached its lowest price, and that as stocks are not large a steady improvement will soon set in, of which miners will derive full benefit in the shape of a better price for their ores. Bwlch United, 2 $\frac{1}{2}$ to 3; the usual report is not to hand, the manager having been in London for a few days. It is stated that he brought some fine stones of silver-lead ore from the 100 or deepest level, which can be seen at the company’s offices, and reported that the works both underground and on surface are being pushed on with undiminished energy, so as to promptly reach the 110, and to get the new dressing machinery completed.

Frongoch, 4 $\frac{1}{2}$ to 5 $\frac{1}{2}$; another parcel of 100 tons of blends has been sold this week at 3 $\frac{1}{2}$, 11 $\frac{1}{2}$ d. per ton. The operations at the mine are still being carried on with great success, and all points look well for increased returns, which it is expected will commence in a few months.

Grogwinion, 2 $\frac{1}{2}$ to 3; the usual monthly sale of 100 tons of lead was made yesterday at 10 $\frac{1}{2}$, 17 $\frac{1}{2}$ per ton. There is no fresh news this week, but some improvement is still noticeable in the lode, and the prospects are considered to be as good as ever. It has been suggested that steps should forthwith be taken to develop the lode below the deep adit, where some exceptionally rich ore ground has already been discovered and partially opened up.

New Wye Valley, 1 $\frac{1}{2}$ to 1 $\frac{1}{4}$; a considerable number of shares are reported to have been taken up by investors at this settlement. The new shaft sinking to communicate with a rich lode in the bottom of the mine is going down quickly, and will, it is said, be finished before the end of the year, when large returns can at once be made. In the meantime other portions of the mine are opening out well, and altogether the mine is stated to be much improved. Another parcel of lead is preparing for market.

Ystwyth, 1 $\frac{1}{2}$ to 1 $\frac{1}{4}$; the recent discoveries and improvements at this mine are said to lead to the belief that yet greater discoveries will shortly be made, and the management are consequently pushing on the operations at the various points of interest with great dispatch. Some of the largest shareholders have this week visited the property. It is stated that the indications in the main lode are much better than could reasonably be expected at so early a period in the company’s existence. In the adjoining mine enormously rich “floats,” or pockets, of ore were discovered, and it is expected that similar discoveries in this celebrated lode will sooner or later be made. The capital of this company is only 24,000*l.*, and working expenses are light, so that moderate returns would give good profits. The adjoining mine returned about 2,000,000*l.* worth of lead from the same lodes.

Van, 13 to 19; the usual monthly report appears in another column. The cross-cut towards the north lode is progressing satisfactorily, and the end is presenting an encouraging appearance, spots of lead being found in the joints. The sale on Thursday—200 ton of lead and 150 tons of blends—realised 286*s.* East Van 4 to 4 $\frac{1}{2}$; the report indicates that the lode for which they have been searching for so many years has apparently at last been found.

Mona, 13 to 15; the mine is steadily improving, especially in the 55 ft. level and Sydney’s shaft. The stock of ore is accumulating faster than the one furnace at present can deal with. The new furnace, however, is nearly completed, and will shortly be started. A fine discovery of bluestone has been made during the week; two more cargoes of it have been shipped. The copper department is opening up well, and returns are now being made greatly in excess of the smelting capabilities of the company. The whole of the workings are in a satisfactory condition.

Gwern-y-Mynydd, 5 to 5 $\frac{1}{2}$; the agent’s report, in another column, is considered to be exceedingly satisfactory, and the various points of operation are all looking well.

Patchey Bridge, $\frac{1}{2}$ to 1; the Bala vein in the 30 east is carrying occasional staves of ore. The 20 west is being driven with all speed to cut some rich veins known to exist ahead of the level. No change elsewhere.

[The closing quotations being given in the Share List on the last page of the Journal it is unnecessary to repeat them here.]

* * * With this week’s Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: The British Iron Trade; Mar-Ion Ore Company; the Gold Mines of Southern India (H. J. Moritz); Brabantian Gold Mine; Rossa Grande Gold Mining Company; Flagstaff Silver Mining Company; Panuelillo Copper Company; Leyett Colliery Verdiert (E. Lever); Machine Mining; Carn Camborne; the Indian Queen’s mining District (R. Symons); Lead Mine Enterprise in Llanarmon; Mining in Cardiganshire—South Cambrian Mines (A. Williams); Llanwrtyd Mine and its Management; the Llanwrtyd Mine. Meetings of Public Companies: Last Chance Silver, South Wyndham Estates and Gold, Rio Tinto, Richmond, Panuelillo Copper, Nerbutha Coal and Iron; Roman Gravels, and Tammarerry Coffee Estate Company. Short Notices of Irish Mines. Reports from Cornwall, North and South Staffordshire, Lincolnshire, Monmouthshire and South Wales, North Wales, Salop, and Cardigan, Derbyshire and Yorkshire, the Forest of Dean, and the Tyne and Wear. Ruby and Dunderberg Consolidated Mining Company. Foreign Mining and Metallurgy. Experiments with Explosive Substances. Institution of Mechanical Engineers, &c.

ENGLISH-AUSTRALIAN GOLD MINE.—The favourable notices we have lately given respecting this property have been fully borne out by the advices received this week. The profit for the month ending March 18 was 243*s.*, and even better results were expected the following month. As we remarked before, the capital of the company is small, and the rate of profit on the same will be so much the higher.

FLAGSTAFF.—Mr. Pearson writes that he informs us for the last time that there is not any negotiation going on as to the Flagstaff Mines, save what is in his own hands exclusively, and he expresses a hope that no one will be misled to believe in any rumours or statements to the contrary, and he states that he is prepared to produce documents conclusive on this point.

SOUTH-EAST WYNAAD ESTATES AND GOLD.—The second cargo of coffee from India, belonging to this company, has been lost through the wreck of the Amelia. The coffee, however, was fully insured.

BELLOWDA (Tin).—In driving the deep adit level the miners on Tuesday struck Webb’s lode in the end, where, we are informed, it is found to be of still richer quality ore than where discovered in the new shaft, and this valuable and masterly lode can now be stopped away, and tin in large quantities dressed and sent into the market forthwith. The results attained at this comparatively young mine are only what have been confidently anticipated by all who have known the property, and the high opinion entertained of it by so good an authority as Capt. Josiah Thomas and numerous others,

who so strongly advised and induced Mr. Brydges Willyams, M.P., to work the mine, are now more than confirmed. The sound practical judgment that has been brought to bear in guiding the operations at the mine during its partial development by Mr. Willyams is now evidenced, and the success of the undertaking is apparently thoroughly established. The mine is exceedingly well supplied with machinery, 30-inch engine, 48 heads of stamps, dressing appliances, floors, and bubbles, with all necessary buildings, plant, &c. The proprietorship of the property is now a small Limited Liability company, and the fortunate owners are sanguine in the expectation, which is also locally entertained, of this being a great, lasting, and profitable mine.

WEST PATELEY LEAD.—“A small leader of solid ore on the foot-wall (the 67),” is properly regarded as a highly encouraging feature, seeing that the upper level—the 56—has been driven upon the same lode (the New Vein) upwards of 60 fathoms, where it has been a continuously rich body of ore, the end yielding fully 4 tons per fathom. The south-west cross-cut has just crossed another branch of spar, intermixed with spots of ore, and letting out much water; this cross-cut is approaching the famous Styne Shaft vein. The stopes throughout the mine are looking well; 32 tons of lead have been sent to the mill for smelting.

NEW KITTY.—Perhaps less attention has been drawn to this property than it deserves. There are, however, persons who are quite alive as to its probable future, and as to the cheap rate at which its produce can be obtained. It appears that by sinking the shaft about 10 or 15 fms. deeper the Wheal Kitty lode will be met with, and this fact should not be lost sight of. It is considered in well informed circles that the present uncertainty in the tin market will give way to a large demand and greatly enhanced prices, and this fact should not be lost sight of by companies in possession of properties in such a celebrated district as that in which this is found.

WEST KITTY.—It will be satisfactory to the shareholders to learn that the operations at this mine are carried on with regularity and success. The agent’s report states that the rise in the back of the 84 fm. level the lode is improving in value, and is now worth 5*s.* per fathom. In the 72 fm. level east the lode has rather declined in value, and is now reported as being worth 10*s.* per fathom; but variations of this description are the characteristics of the Wheal Kitty lode, and that it is maintaining its appearance, size, and general indication so well is undoubtedly a strong and good feature. It is also significant that in the 60 fm. level driving east of shaft the lode is of similar dimensions, increasing in value, now worth 6*s.* per fathom. It is evident that West Kitty is making a future for itself.

WEST CARADON MINE.—During the past week a lode worth 1 ton of copper ore per fathom has been met with in the 38. Four points, all producing copper ore, have thus far been opened—Gilpin’s lode in the adit level, producing saving work for copper ore; Vivian’s lode at the 50, worth 2 tons of ore per fathom; Vercoe’s lode in the 50, yielding very rich ore; and the lode just found in the 38, worth 1 ton of ore per fathom. There is a large quantity of undeveloped ground at all these points. Considering that operations at the mine were only commenced in the beginning of March, the results thus far have exceeded all expectation.

At the meeting of the Carmaux Mines Company, held on the 22nd inst., the dividend for 1879 was fixed at 80*s.* per share, 30*s.* of which was paid last November, and the balance of 50*s.* will be paid on and after the 1st proximo, by Messrs. C. Devaux and Co., 62, King William-street, E.C., at the rate of 4*s.* 50*s.* for the nominative shares, and 4*s.* 80*s.* for the shares to bearer (coupon No. 40).

CHEMICALS, MINERALS, AND METALS.—Messrs. J. Berger Spence and Co. (April 24).—Alum: Loose Lump, 6*s.* 15*s.*; ground, 7*s.*—Arsenic: Best white powdered, 10*s.* 10*s.*—Blanching Powder, 6*s.* 7*s.* 6*d.*—Borax: Refined English, 6*s.*—Copperas: Green, 50*s.*—Copper: Sulphate, 22*s.*—Nitrate of Lead, 30*s.*—Nitrate of Soda: 18*s.*—Potash: 11*s.* 4*d.*—Soda: Cream, 20*s.*—Sulphate of Zinc, 11*s.* 10*s.*—Sulphur: Roll, 8*s.*; flour, 10*s.*—Tin crystals, 7*s.* 4*d.*—White lead, 21*s.* 5*s.*—Brimstone: Best thirds, 6*s.* 5*s.*—China-Clay, 3*s.*—Manganese: Sulphate, 4*s.*—Ochre, 5*s.* 15*s.*—Oxide of Zinc, 25*s.* 10*s.*—Tale, 5*s.*—Umber, 5*s.*—Copper: Best ingot, 70*s.*; seconds ingot, 69*s.*—Lead: Best soft English, 16*s.*—Pig-Iron, Forge, 42*s.*—Spelter, 21*s.*—Tin: British common block, 90*s.*—Naphtha, Miscible, 4*s.* 10*s.*

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Apply, in first instance, to “D.” care of Mr. Alfred Barnard, Advertising Agent, 49, Fleet-street, London, E.C.

R ENHAGEN’S METAL VEINS AT HATFJELD-DAL NORD-LAND ARE FOR SALE.—From analyses taken of three samples the results were as follows:—General Sample No. 1 contains 0.25 per cent. silver, 40.20 per cent. lead, and 1.68 copper. No. 2, taken out of No. 1—clean galena containing 0.14 per cent. silver, and 36 per cent. of lead. No. 3—clean grey copper taken from No. 1, containing 2.95 silver, 30.85 copper, as well as a small proportion of gold, but not sufficient to influence the value of the ore.

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NOTICES TO CORRESPONDENTS.

** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

ROCK DRILLS—"H. G." (Islington).—The speed attained with the rock drill is usually about double the rate of hand labour. In soft ground the difference is not so great, in hard ground much greater. In tough springy ground the drill does comparatively nothing. The various drills generally used are advertised every week in the Journal; all of them work well if properly used, and are subject to about the same amount of wear and tear and breakage. If four drills are required constantly at work, five should be purchased, but this ought to be an ample reserve.

PHOSPHORESCENT SAFETY LAMPS—"M. E." (Nottingham).—The durability of the illuminating power of surfaces covered with luminous paint appears to depend, to a great extent, on the speed of absorption. If a plate be exposed to ordinary daylight the illuminating power will be less at first and will quickly fade. The best of these lamps would not be reliable for exploring for more than 30 minutes; for although the plate itself can be seen for several hours, it soon ceases to emit light of any useful intensity.

REVISED—"Anxious" (Rock-Drills)—"O. C."—"W. C."—"A. J. W. S."—"J. D. J."—"F. F." (Gravesend)—"J. W." (Wheatley) should send an address where a letter will reach him; we forwarded one to Redruth, but it was returned through the Post Office—"Shareholder" (Wheatley Creb)—"Old Reader" (Bristol)—"Investor" should write to the secretary—"Ireland"; Perhaps next week—"F. B." (Andover)—"J. B. J." (Headingley)—"R. H. R." (Boston, U.S.A.)—"T. E. C."—"Creditor"—"Investor" (Leeds)—"E. H." (Strata, Florida); Next week—"Shareholder" (Richmond).

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, MAY 1, 1880.

EXPLOSIONS IN MINES, AND THE MINES REGULATION ACT, 1872.

At the North Staffordshire Institute of Mining and Mechanical Engineers' meeting at Stoke-upon-Trent, on Monday (Mr. W. Y. CRAIG, M.P., President, in the chair), Mr. J. G. BAKEWELL read a paper on the above subject, in the course of which he said—The Royal Commission on Mines will most likely report in a short time, and legislation will quickly follow. Therefore, if the members of the mining profession are to be heard, they should calmly and dispassionately arrive at some conclusion on the matter. The present Act assumes that accidents which have hitherto been inseparable from mining are preventable by the mining engineer, and then it proceeds most unfairly to make him personally responsible for them. I hold that we have a perfect right now to demand that the Act should be altered, so as to make it practicable; and then no body of men would be found so anxious and willing as mining engineers to join in the glorious work of saving human life. The first question is, what should be done with regard to explosions in mines, and the means of grappling with them. If one-hundredth part of the money which has been spent by the Legislature in investigating the science of munitions of war had been applied to the investigation of the laws which govern explosions in mines we should not have been in our present state of ignorance respecting them, and many lives would have been saved. Explosions take place from time to time, yet the Government, instead of endeavouring to demonstrate the causes (as they do if one of their precious guns bursts), content themselves with sending down a barrister, often one who has a very hazy knowledge of mining, and whose sole object seems to be to find a poor scapegoat on whom blame may be laid. It is a disgrace to the scientific advancement of the present age that the subject should be left in its present state. It is time to have done with such pernicious work as merely passing an Act providing that "an adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless noxious gases," followed by other provisions which are utterly useless if this regulation can be carried out. There are other causes of explosion than those contemplated by the Act which require to be guarded against. We know that in many pits in which the fiery blast has been gone from end to end of the workings those workings could not possibly have been full from end to end of explosive gas. It is not impossible that such blasts may have been started by the explosion of a more or less small accumulation of gas in some parts of the workings; but how is it that in some cases these explosions are local in character and in others they scatter death over every part of the mine? Government ought not to rest till every thing has been done that science can suggest to clear up this question. One scientific man who has investigated the question of dust in mines asserts that air with 1 per cent. of gas and a due admixture of dust is an explosive mixture, and that air with 2 per cent. of gas and dust is highly explosive. This matter should be thoroughly tested, and, if necessary, some provision should be made against such a danger. It has been demonstrated that gas when mixed only with air in such small quantities as not to be explosive under ordinary circumstances becomes explosive when compressed. What a vista this opens out as an explanation of some of the most frightful explosions! Working miners, engineers, and managers, and the whole country have a right to demand that these matters should not be left to accidental investigation, but should be demonstrated at the expense of the State. A danger thoroughly understood is robbed of half its power of doing harm. It may be said that it is not of so much consequence to know the scientific laws which govern explosions as the prevention of the possibility of anything igniting the explosive gases; but the knowledge of some of these laws would lead to the removal of the danger. For instance, if the dust were proved to be highly dangerous it could be laid by water. Two remedies are obviously required. First, the invention of a light which should be absolutely safe. I do not think any light which is dependent for its combustion on the surrounding atmosphere will answer this requirement. The electric light and the luminous paint promise success in that direction. Another remedy obviously required is the removal of the danger caused by blasting as at present carried on. I think this might be attained by the invention of an explosive which under no circumstances would yield a flame. The impossibility of providing such an explosive must be demonstrated by the State before blasting must be prohibited, because some of the best mines in the kingdom could not be worked without blasting. As to the Act of 1872, mining engineers have no right to complain of the Legislature passing any definite regulations they think necessary. What we have a right to complain of is that some of those regulations cannot be carried out—such, for instance, as that "an adequate amount of ventilation should be constantly produced to dilute and render harmless noxious gases," and the timbering rule, which orders that the roofs and sides shall be made secure, both these rules being impracticable. We have a right to demand that the words "as far as reasonably practicable" should be incorporated in the Act.

One of the most extraordinary points in the Act is the very distinct way in which the owner, agent, and manager are all made responsible for the same breach of the Act. This is so alien to English law that the stipendiary magistrate of this district refused in a recent case to convict on it, but his decision was overruled by a higher Court. The responsibility should be confined to a duly certified manager, unless the manager proves that he has been refused something which he required to carry out the Act, or has been hindered in the discharge of his duties. The words of the Act relating to the control and daily supervision to be exercised by a certified manager are such that it is perfectly impossible for any manager to carry out the Act. The Act is, in fact, confounding the duties of manager with those of the underlooker. The duties of each should be clearly defined, and the underlooker should also be certificated, and not leave the pit where a certain number of men are employed till relieved by another duly appointed underlooker. Inspection has done good. But perhaps, instead of two Inspectors to one district, with sometimes discordant views, it would be an improvement if the district were divided, with an Inspector to each. It would be an advantage to remove inspectors from one district to another (say)

every five years. What we have most to complain of, however, is that Government Inspectors do not take their fair share of responsibility. If they visit a mine and find it, on the whole, well and carefully managed, is it asking anything unfair of them to say so? On the other hand, if they do not find it so, would it not be to every one's advantage for them to say so at the time, and not be wise only after an accident has happened? After an inspection of a mine each Inspector should send a written detailed report of the result of his visit to the authorities at the Home Office, and a copy should be sent to the responsible manager of the mine. The country would then see that there are causes at work which are not fully understood by either Inspectors or mining engineers, and which, therefore, cannot be guarded against by even the most careful managers. If differences of opinion arise a competent tribunal should be appointed to investigate the case, and in this way a most valuable code of unwritten law would be gradually piled up, and be of valuable assistance to the profession. A committee was appointed to draw up resolutions to be submitted to the next meeting, with a view of having the opinions of the members of the Institute on the subject laid before the Home Secretary.

SELF-ACTING COAL-CUTTING MACHINERY.

Of late considerable improvements have been made in machinery for cutting coal, and it is surprising that our colliery owners and mining engineers have done so little in assisting inventors by adopting the economical appliances placed within their reach. Mr. F. HURD, along with the Messrs. FIRTH, of Leeds, have introduced several machines that have been nearly all that could be desired, yet there has been a disinclination on the part of coal owners to adopt them. The Messrs. FIRTH have long had pick-machines in use at some pits near Leeds, which we have seen at work, and to our thinking they were not only excellent practical workers but most economical ones as well, getting in a given time five or six times as much coal at least as could be obtained by hand, and with considerably less loss, owing to the small quantity of slack produced. The machine of the Messrs. FIRTH, which we saw at work, was managed by an ordinary collier, there being no complicated parts about it, and as the motive power was compressed air a good deal of the latter, perfectly pure, was discharged in the workings, making the places agreeably cool and enjoyable. Still comparatively few machines are now used in English collieries, whilst they are being extensively adopted in Scotland, and in Austria, Germany, and Belgium, and we were informed in Leeds a few days ago that the Messrs. FIRTH were sending a good many of their machines to the two last-named countries. In the present state of the coal trade, when so much depends upon the low price at which the produce of our collieries can be sold, it is certainly strange that the owners and managers of mines should not have got out of the old ruts, but should be contented with the primitive mode of getting coal which has been in use for ages, or nearly as long as coal has been worked. No progress has been made, for the pick is still the lever adopted, and has been proved to be a most dangerous one, for our yearly returns show that more lives are lost from "falls" than from any other cause so far as coal mines are concerned. On the other hand, the machine does not endanger life, but is a great preventive of accidents, so that safety may well be included among its advantages.

Amongst the inventors who have paid more than ordinary attention to the construction of coal-getting machinery is Mr. F. HURD, of Wakefield and Edinburgh, who has not only devoted much time to the matter, but has spent large sums in experiments and models, as well as in the actual making of machines that were not what might be termed perfect, but which enabled him to see where improvements could be made. He has thus been enabled to produce a machine that has been most successfully tested, and is now being extensively adopted at many collieries in Scotland. It is termed the patent Self-acting Coal Getter, and can be worked by endless wire-rope or chains, compressed air, explosive gases collected from the mines, is adapted for seams of coal from 20 in. in thickness and upwards, enabling a colliery owner to set and fill the coal at a cost not exceeding 5d. per ton in a 20-in. seam, and far considerably less than that sum in seams above the thickness named. That is to say the cost would not be one-fifth of that where the coal was got by hand. In addition there is also the marked saving effected in consequence of the small quantity of slack made by the machine as compared with that resulting from the "pick." By the machine the coal is undercut, and from the bottom is lifted up by means of a peculiarly formed wedge-shovel 14 in. wide, and partly double-wedged so as to prevent its slipping sideways on the application of the power. To meet the varied requirements of different mines there are three machines of special construction, so that either thin or thick seams of coal can be readily undercut at any angle or height that may be required, either horizontally or perpendicularly, all the motions being self-acting. The machine is somewhat similar to one that has been before described, consisting of a cutting-wheel, the periphery or stock in which the cutters are fixed being placed eccentric to the fulcrum on which the cutters revolve, the motive-power cylinder being 6 in. in diameter and 12 in. stroke. The cutters are driven by an ordinary bevel pinion, and the pressure is resisted by antifriction bowls, which also act as drivers, thus dispensing with guides and slides. The cutters, which are made of square titanic steel, are put into or taken out of cut by a swivel nut and screw acting on the lever or radial arm in which the cutters revolve, or by a pinion or quadrant. They are set sideways above and below, allowing for the clearance of the disc, and are adjusted radially to vary the depth of the cut according to the quality of the coal. In one of the machines the eccentric rim of cutters is driven by a double pinion with bevel teeth and a recess to embrace the inner centre ring, and in another by antifriction bowls driving direct on the back of the cutters. The leading wheels are kept in position on the rails when at work by a bowl mounted in a differential lever with self-acting adjustment to adapt itself to irregularities on the face of the coal without the possibility of getting off the rails whilst working. With regard to the undercutting, machines are self-acting in every way, so that they require little or no attention, as the necessary props for the roof can be placed as near as 29 in. from the face, leaving ample room for the working of the cutters. With a working pressure of 20 lbs. to the square inch of air the machines in ordinary hard coal have cut 30 yards per hour 1 yard deep with a groove of only 3 in., so that only a small portion of slack has been made; but with a pressure of 50 lbs. to the square inch the cutting power could be increased to something like 1 yard per minute, which would be more than could be effected by 100 miners in the same time.

Whilst at work the machines are so constructed that the cutters pass along the face of the coal in a like manner to a reaping machine cutting a field of corn, there being no stoppages until the work is completed and the coal cut. The directing power consists of a man and boy, who have an easy time of it, so easily worked is the machine. The rails on which the machines are fixed have been patented by Messrs. HURD and FIRTH, and are both simple and effective, for they can be taken up and put down again in a few minutes as the coal is cut. The sleepers are punched out of a solid piece of iron, and require neither wedges, bolts, nor pins, being self-interlocking after the style of a Chinese puzzle—simple, ingenious, and economical—being a great improvement in connection with coal-cutting machines, enabling those in charge of them to take up and re-lay the rails with great rapidity, whilst the rails are firmly held. Compressed air has been found to be well adapted for working the machines, but in the first attempts it was found most expensive, owing to the heavy cost of laying down pipes from the surface to the working places. This, however, was got over by a system patented by Messrs. HURD and SIMPSON, by which the air-compressor was made portable, and placed in close proximity to the machine to be worked. The apparatus for expanding and intensifying the pressure of the compressed air consists of a retort containing a perforated crucible made of soapstone and other material charged with ignited charcoal, scrap iron, or limestone. The air is conveyed into the crucible which generates the heat for expanding the air, which thus escapes to the outer chamber of the retort, and is then conveyed to the engine to be driven. A check valve is placed near the entrance of the crucible to prevent the air escaping back. In the early history of compressed air and

the machinery for obtaining it there was found to be a loss of about 50 per cent. of power, which was, of course, a great drawback, but by the patent of Messrs. HURD and FIRTH this was done away with, so that 3 lbs. of air pressure was obtained for every pound of steam employed. The self-acting coal cutter is undoubtedly a most valuable invention, and it is gratifying to find that it is now making its way in the Scotch collieries in particular, the owners finding that they can get their coal in a more marketable state—that is, large—and at a much less cost than by hand. The price for the machine complete is about 160*l.*, which is recouped in the course of a few weeks' working. It is, therefore, to be hoped that coal-cutting machinery will be more generally adopted to the benefit of both colliery owners and inventors, whose interests to a considerable extent may be looked upon as identical, for what is to the advantage of the one must also be to the advantage of the other.

IRON TRADE PROSPECTS.

Prices of pig in both the Cleveland and the Western Scotland districts have experienced a further sharp drop during the past fortnight. The Americans have reduced their quotations in the hope of keeping out English pig, and on this side of the Atlantic rates have also been immediately cut down in sympathy. The activity which commenced in the British iron trade in the course of last summer has thus become almost a thing of the past—a mere matter of commercial history. Still we cannot altogether forget the remarkable experience which we have acquired during the last ten months. In spite of the enormous protective duties, so-called, imposed on iron entering the United States, we have, probably as much to our surprise as to the surprise of the Americans, proved once more our ability to force our iron into American markets. This is proved by the fact that recent sharp reductions on the part of American ironmasters in the price of pig have been avowedly made in order to stem the torrent of foreign pig. This is, after all, a proud tribute to the perseverance and energy of the proprietors of British ironworks, and the result has undoubtedly been to render this year at any rate a profitable time to them.

But the question is—"What is the future in store for the British iron trade?" It will not do for us to explore—or to attempt to explore—to minutely into the secrets of futurity; still, as prudent men of business, we ought to consider the future as well as the present. It appears to us that a return to lower prices is not by any means the unmixed misfortune which some writers on the subject may, perhaps, suppose. In saying this, we take our stand upon the broad general principle that cheapness of production is calculated to ensure activity of consumption. In November and December steel rails had reached in the United States the enormous price of 18*l.* per ton, and they had risen in England also to an alarming level. By slow degrees, but still in obedience to irresistible circumstances, the price of American steel rails has been forced down to 14*l.* per ton, and English, French, and Belgian steel rails have also fallen proportionately. Well, we are glad that this should have been the case. At 14*l.* per ton steel rails are in a much sounder and healthier position than were at 18*l.* per ton, and for this simple reason—18*l.* was an unnatural and impracticable price, while 14*l.* per ton is an indication of, at any rate, a partial return to reason and common sense. Granting for a moment that there is still room for a large number of new railroads, it is still undeniably true that to be economically successful they must be constructed upon fair and reasonable terms. If the builders of the 12,000 miles of new railroad undertaken during the last twelve or eighteen months in the United States had to purchase all their steel rails at 18*l.* per ton their calculations must have been terribly deranged, and their enterprises must have proved financial disappointments. It is possible enough that this may be the case after all, but still a return to more moderate rates for steel rails may avert across the Atlantic a repetition of the alarming panic of 1873, as it will enable constructive operations to be carried on upon sounder principles. A return to reasonable prices for our railway iron must also have a powerful effect in stimulating the work of railway construction in our colonies. It will encourage the Anglo-Indian authorities to proceed with the construction of more State lines, it will relieve the anxieties of the Canadian Government in respect of the Canadian Pacific Railway, and it will also have a good effect on railway enterprise in South Africa and Australasia.

NEW METHOD OF TREATING COPPER, LEAD, AND ZINC ORES.

Some important improvements in treating the ores, residues, and fumes of copper, lead, and zinc, and in extracting silver from copper and lead ores, have been patented by Mr. LAMBOTTE-DOUCET, of Brussels, but having apparently been his own translator the description contained in the English specification is very unsatisfactory. The process embraces three distinct operations—the conversion of the sulphides of copper, lead, and zinc into chlorides by vapour of anhydrous chlorhydric acid under variable pressure; the collection of the chlorides volatilised in a current of atmospheric air in condensation chambers; and the reduction by galvanic electricity of the chlorides thus obtained. He introduces the ore reduced to powder and moistened with sulphohydric acid into a reverberatory furnace containing a muffle or other suitable vessel connected with condensation chambers, wherein it is brought to a dull red-heat in a current of anhydrous chlorhydric acid, the result being chlorides of the metals and sulphuretted hydrogen, which latter passes off in vapour. When the chlorination is complete he raises the temperature and admits into the retort warm or cold atmospheric air to volatilise the chlorides, which then pass on to the condensation chambers, in which they are subjected to a shower of water, hot or cold, according to the nature of the chlorides. Finally, he decomposes the metallic chlorides in solution by thermoelectric currents, generated by the superfluous heat from the heating chambers, which liberate chlorine at the positive pole of the battery, while the metal accumulates at the negative pole.

In the treatment of argentiferous galena and sulphide of copper the ore is melted with a flux composed of an equivalent of carbonate of soda and lead ores, and an equivalent of carbonate of potash, together with charcoal (carbon) added to six parts of nitrate of potash. These proportions are very variable, and depend entirely on the richness and nature of the ore. The carbon must always be in excess in order that the sulphosalts and the sulphates produced should be decomposed and completely transformed into metal and alkaline sulphides. These alkaline sulphides increase the fluidity of the mass and preserve the metal while in fusion from oxidation. These sulphides are easily soluble in water, therefore nothing is easier than to separate them from the metallic lead by a simple lixiviation, and afterwards to reconstitute them and make use of their constituent parts in subsequent operations. The lead thus obtained is run into crucibles (similar to those used in the process of extracting silver from lead by crystallisation). These crucibles, which have been previously warmed so that they may not lower the temperature of the metal in fusion, receive in this state a sufficient quantity of zincate of soda, calculated by the proportion of silver contained. The temperature is then raised to 540° centigrade. The contents of each crucible is carefully stirred to ensure their being completely mixed together. Immediately after this stirring he introduces into the molten metallic mass several copper wires furnished with copper handles, which he places in communication with the poles of a thermo-electric pile, and he lowers the temperature to 430° centigrade to facilitate the solidification of the alloy of zinc and silver, which with the alkaline scoria separates of its own accord from the molten metallic mass. Subsequently distilling this alloy in a suitable retort he obtains the zinc, which is volatilised, and the silver remains the sole residue of the operation.

In treating cinders formed in the working of precious metals he forms alloys in variable proportions of copper, lead, and antimony, by precipitating with zinc or iron a solution of these metals in the presence of the gold and silver contained in the crushed ore or metal workers cinders which are to be operated upon. He then melts the

alloys thus obtained in an easily fusible alkaline bath, composed according to circumstances of hydrate of soda and of potash, or of carbonate of soda and of potash in equal portions. He thus obtains with the assistance of the above-named metals a cast of lead, copper, and antimony, which contains in a very reduced compass the whole of the gold and silver which was disseminated in their original or mixed state throughout the auriferous and argentiferous matters thus treated.

OUR OLDEST IRONWORKS—KIRKSTALL.

Amongst the oldest ironworks in the kingdom must be classed those at Kirkstall Abbey, near Leeds, and there is no doubt that the monks at that place many generations ago were acquainted with the manufacture of iron. The Abbey was founded between 1147 and 1153, for monks of the Cistercian order, and was not dissolved until 1540, its revenue at that time being assessed at from 8000*l.* to 10,000*l.* per annum. In digging some foundations there was the most complete evidence that iron had been made on the ground some hundreds of years ago, and there is an old water-wheel that used to work the hedges upwards of 200 years ago. The works as they are now were established in 1779 by the family of the present owners—Messrs. Butler—and they are famous for the production of railway tyres, axles, and bars, and for hydraulic presses for pressing iron and steel, one having been made on the Haswell system capable of exerting a pressure of something like 1400 or 1500 tons. The works are also known in connection with machines for straightening and planishing round bars, as well as steam hammers on Naylor's system. In the straightening of bars, the latter are passed between the faces of two discs continually revolving in the same direction in a vertical plane, moving along in different directions according as they are above or below the centre of the discs, the bed being raised and lowered by screws. By this means the bars are not only straightened and smoothed, but are compressed so as to gain 20 per cent. in torsional strength. There is also mode for polishing the bars when cold by carressing them to revolve, and at the same time to travel over the face of a solid emery wheel. The pressing of iron and steel, it may be said, has of recent years received more than ordinary attention from engineers, and is now adopted at several of the largest works in the kingdom. It has been successfully used by Sir J. Whitworth for giving intense pressure to fluid metal, and in applying it he found that a column of metal was diminished one-eighth of its whole length in less than five minutes, the air cells being thoroughly expelled. The value of the pressure whilst the metal was in a fluid state was in proportion to the ductility required. If steel was required for manufacturing purposes generally it appears that it cannot be produced with the necessary amount of ductility without pressure. A 2000-ton press would in power be equal to an 80-ton hammer, and one of these presses is in use at the Cyclops Works, Sheffield, for bending armour plates to the shape of the sides of ships. In respect to steel, a pressure of 6 tons to the square inch was found to be all that could be desired, a larger amount making no material difference. Returning, however, to Kirkstall Works, near to the picturesque ruins of the old abbey, it may be stated that they cover about 14 acres of ground, and when in full operation find employment for nearly 1000 hands. There are, however, some interesting features connected with them, irrespective of the production of iron, for, according to a statement made by Mr. Butler, the Staffordshire iron trade in some measure sprang from them. Two lads—twins—it is stated, went from Kirkstall Forge into Staffordshire, and set up a small establishment where they made bullet iron. These lads were the Thorneycrofts—a name so well known in connection with the iron trade in Staffordshire. Then, as to Bolckow and Vaughan, it appears that Mr. Vaughan's father turned rolls at Kirkstall Forge before going further north. As showing the antiquity of the Works, in connection with the ruins there is a cast-iron mullion in one of the windows which must have been made hundreds of years ago. The Works and the Abbey are amongst the most interesting objects to be seen in the neighbourhood of Leeds, and will well repay visitors interested in the manufacture of iron, or those who seek for venerable monastic remains, most of which are now fast disappearing.

THE MINERAL WEALTH OF JAPAN.

The activity in the development of the mineral wealth of Japan has recently led to considerable orders being received in this country for mining and other machinery. The company at Chesterfield known as OLIVER & CO. (Limited), where mining machinery is made a specialty, it is understood has received some good orders. Previously Messrs. TANNETT and WALKER, of Leeds, provided a large quantity of machinery for the Japanese Government establishment, where there are rail, bar, and forge mills, with heating furnaces, steam hammers, and all the best appliances to be found at the leading English works. The rich and productive Empire of Japan yields considerable quantities of gold, silver, copper, iron, and coal, whilst the Japanese armourers excel Europeans in the tempering of steel. There are vast deposits of magnetite ironstone in vertical beds from 12 to 15 ft. thick. The ores are rich, quite free from sulphur, and contain very little titanium. Iron sand is also found in abundance, and furnaces have been specially built for smelting it. The furnaces are about 9 ft. by 4 ft. at the base, and 4 ft. high. The ground is dug out, making a pit 10 ft. deep, which is filled up to within about 1 ft. of the top with hard pounded charcoal; then there is a layer of clay and sand, which is hardened by a covering of charcoal fire, and on this the foundation of the furnace is erected. When the smelting begins the furnace is entirely filled up with charcoal, the box bellows are set in operation, and in the course of 12 hours, as the whole mass sinks down, iron sand and charcoal are filled in, the smelting occupying two days and three nights. The whole process lasts about eight days, two days being occupied in building the furnaces, three for smelting, and three for coating, removing the steel, and preparing the place for a new furnace. English capital has been introduced at several places, and at Nakakosaga one firm has erected a furnace for smelting the magnatite. The present production of iron is at the rate of nearly 8000 tons a year. The Japanese steel it may be said stands unrivalled by any other, no matter for what purpose it may be required, and as the ore from which it is made is most abundant there is every probability that it will be most extensively made by the English firms that have established works in the country for the raising and smelting of the ores. There are also vast deposits of excellent coal, and it was owing to the geographical position of the island, lying on the confines of the Eastern hemisphere, that the Americans established depots for the supply of American steam vessels. The trials made with the Japanese coal for steam purposes were most satisfactory, and it is now largely used. There are several coal mines now being worked in some of the districts of Kinsin and Nippon, as well as in other places, and those who have visited the island, testify to the abundance of coal of excellent quality. There are said to be upwards of 400 different mines of iron sand being worked, whilst many of the metamorphic rocks contain magnetic iron in fine crystals. Many English mining experts are now connected with the coal and other mines in Japan, so that the production is rapidly increasing, as is the manufacture of rolled iron and steel, whilst many of the mines and furnaces are near to a navigable river, so that their products can be sent direct to Yokohama or to Tokio. Japan, it will be seen, promises to become a most important country for the production on a large scale of both iron and steel far more than will be required by it.

AN ELECTRIC TELESCOPE.—The latest of the many scientific toys which have one after another become scientific instruments of more or less practical utility is what may be called justly enough an electric telescope. It has long been possible to write by electricity; speaking by electricity has become common enough in the last year or two; and it is natural that enquiring and inventive minds should ask themselves whether they cannot enable us to see by electricity. As usually happens, it would seem that several such minds have been employed upon the same problem. An instrument for the purpose has been described in a paper read before the Cambridge Philosophical Society; an actual trial of another is said to have been made some time since in France; and a third has, we are told, been actually exhibited with

success in America. It would appear that the principle of these various attempts is, of course with variations, sufficiently identical. The object to be seen is exposed to a mirror or plate composed of sensitive pairs of elements, and this plate is connected by wires with a similar one in the presence of the spectator. There is nothing at all improbable in this, though of course it is difficult to say how far it could be got to work practically. From the nature of the case the instrument, even if perfected, would hardly be of such general application as the telegraph and telephone, the interchange of language being of more obvious importance than the communication of visual pictures at a distance. In exceptional cases, however, and especially for some scientific purposes, the device might be of practical use, and it evidently gives scope to the imagination. Anybody who has the latter quality sufficiently developed may fancy, if he chooses, a combination of telephone and telescope which would enable a representation of "Phèdre" or of "Hamlet" to be seen and heard simultaneously in London and in Paris.

RELIABLE AND ECONOMIC ELECTRIC LIGHT: THE "BRUSH" SYSTEM OF ELECTRIC LIGHTING.

The successful public trials of Mr. C. F. Brush's system of electric illumination made by the Anglo-American Electric Light Company at their works in Hatton Garden were fully referred to in the *Mining Journal* of Dec. 27, and the economy and reliability of the system was then pointed out. The favourable opinion then pronounced has been further confirmed by the continued use of the Brush lamps and generators, and during the week a highly successful official trial of the electric light was made on board the *Inflexible* at Portsmouth, with the object of ascertaining the amount of horse-power required per light, the cost, efficiency for illuminating, duration of carbons, and other practical questions. The turrets were used for purposes of convenience, being in the neighbourhood of the motive power and the electro-plating workshops, where the electric appliances used on board ship are constructed and repaired; but it is understood that should the experiment prove satisfactory, as it did, the light will be employed for masthead and bow-lights in the armour-clads, and also for the general lighting of the dockyard.

The large extent to which the system has been adopted in the United States for factories, railways, and mines was noticed at the date mentioned, since which the Brush light has been applied for the lighting of South Kensington Museum, where nine lamps do the work of 13,000 gas-burners, at a saving of 12*l.* a hour and a reduction of 10° in temperature. At the trials at Portsmouth the lamps continued burning without interruption for eight consecutive hours, and there is no doubt that when necessary 16 or 24 hours' continuous illumination could be ensured with equal facility. An engine of 12-horse power was used to rotate the dynamo-electric machine, which is of the simplest and most durable character yet constructed, consisting of eight magnets recessed on an armature and four powerful electro-magnets, surrounded by 600 lbs. of wire, the machine itself containing a total of 800 lbs. The apparatus, which weighs 2200 lbs., possesses the great advantage of requiring no minor machine, the same current which produces the light serving also to excite the armatures. Sixteen lamps were placed in the stokeholes, engine-rooms, and other parts of the ship, the whole of which were lighted from the same circuit; and it is reported that as many as 18 can be produced, the whole question resolving itself into a matter of engine power.

At the Portsmouth trial the engine made about 120 revolutions, the machine, which was worked from a belt, revolving at the rate of 800 revolutions a minute. The lamps are equally as simple as the machine. They contain no wheels or gearing, the carbons being automatically adjusted by electro-magnets, and steadied by means of hollow plungers filled with glycerine, the carbon being 12 in. and the negative 6 in. long. They burn for the space of nine hours; but as each lamp is provided with a double set of carbons, the reserve set being automatically lighted the instant the other is consumed, the lamps will burn for 18 hours continuously without requiring any attention. Each light is equal to 2000 candles. The light was perfectly white and steady, and, though no globes were used on the occasion, was pleasant and agreeable to the eye. The first cost of the machine used was 400*l.*, and though no estimate of price has yet been worked out, it is expected that the cost per light per hour will not exceed 2*d.*, or considerably cheaper than gas. The experiment was witnessed by Admirals Ryder and Foley, Mr. Robinson, chief constructor, Captain Labrano, of the Italian Navy, and by a number of English officers.

BRITISH PATENT RIGHTS AND FOREIGN MANUFACTURE.—Vice-Chancellor Bacon has now given his decision in the case of Nobel's Explosive Company against Jones, the details of which were given in last week's *Mining Journal*. The Vice-Chancellor referred to the statute 38 and 39 Vic., c. 17, s. 40, which enacts that "the owner and master of any ship having on board any explosive shall not permit the same to be unloaded and delivered to any person who does not hold an importation licence from the Secretary of State, and any transhipment shall be deemed to be delivery," and said that, having regard to the nature of the invention, it appeared to him that it was impossible to tranship or in any manner to handle or move the commodity made according to the invention without at the same time using the invention. For this opinion "Betts v. Neilson" ("L. R." 3, ch. 429, and 5 H. L. 1) was an authority. As regards the defendants' denial of their liability to the plaintiffs for any infringement, on the ground that they had not acted as owners or agents for the owners in the matter, by only as Custom House agents, it had not been explained why the bills of lading were indorsed to them, and they were described as importers. The defendants had procured the delivery and transhipment of the goods, and even if their services were gratuitous and benevolent as Custom House agents that Court was always in the habit of holding that anybody who took part in a wrong of that description was liable to be restrained from committing the wrong, and was answerable. If this were not the law it would be within the power of persons meaning to do wrong against the property of others, and being able to find friendly and gratuitous agents ready to assist them to accomplish their purposes with impunity. The plaintiffs were entitled to the judgment asked for, with costs.

HARTLEY COLLIERY ACCIDENT FUND.—The annual balance-sheet of the trustees of the fund for the relief of widows, orphans, and others left destitute by the accident at the Hartley Colliery has just appeared for the year ending in February last. The receipts from interest on the invested funds have been in the total 1218*l.*, and the payments 1636*l.*, out of which 1454*l.* has been expended for the year in relief to widows, orphans, and others. The invested funds still amount to 30,358*l.*, and the total funds to 30,975*l.*, but this sum is being slowly reduced. There still remain 69 recipients of relief from the funds, 23 of whom are widows of men killed at the time of the accident.

THE PROPOSED NEW RAILWAY FROM HULL TO BARNSLEY.—A meeting of miners and others was held at Mexborough on Monday in favour of the proposed new railway from Hull to Barnsley to "tap" the South Yorkshire coalfield. A letter was read from Mr. W. H. Leatham, M.P., stating that he had given his consent to the proposed railway, which he hoped would have the desired effect of reducing the excessive charges complained of in South Yorkshire. Mr. Gerard Smith, of Hull, explained that the line would enable the colliery proprietors of South Yorkshire to compete with the colliery proprietors of the North of England. A seam of coal 8 yards thick had been discovered at a depth of 600 yards near Birmingham, proving that Birmingham was surrounded by a new coalfield thousands of acres in extent. The chances were that the South Yorkshire district possessed some share of that immense seam. Hull occupied a fine geographical position, but the advantages of that position were not enjoyed, because they were hampered and restricted by hostile railway tariffs. The export of coal from Hull in 1878 was a paltry 500 tons, whilst that of Newcastle was 6,000,000 tons. Cardiff coal was a very serious competitor with South Yorkshire coal, because ships on reaching Hull knew they could not obtain South Yorkshire coal, and at

once went round to Cardiff, which exported 4,000,000 tons to foreign ports. That was what they hoped to bring to Hull when they had their new railway and their new docks. A resolution in favour of the proposed line was unanimously carried, and it was further resolved to petition Parliament for a Royal Commission to enquire into the unequal system of levying charges for the carriage of coal, iron, steel rails, and all classes of finished goods from South Yorkshire by the railway companies.

MANCHESTER GEOLOGICAL SOCIETY.

THE LONGWALL SYSTEM OF WORKING COAL.

At the ordinary meeting of members, held on Tuesday at Manchester, Prof. BOYD DAWKINS occupying the chair,

Mr. W. J. GRIMSHAW occupying the third and concluding part of a paper, prepared by himself and Mr. HERBERT PHILLIPS, on the longwall system of working coal. He said, in comparing different modes of coal-getting, it was requisite to take into consideration the comparative getting facilities of different coals, as this had an important bearing upon the "charters" and the get per head. It might be remarked, *en passant*, that collating the number of tons wrought per life lost was, as a test of efficient working, to a certain extent misleading. If in one district 2 tons of coal were wrought as easily as 1 ton in another, it should follow, other considerations apart, that the greater "get" per life lost should be in the former district. The reverse, however, might be the case when the hardy wrought seam was gotten by a superior system to the more easily worked one; but cases in which such a great difference was obtained would be very few and far between. A record of the time spent underground during the year by the total number of underground employees might, possibly, be a useful record for comparison, and certainly would be an interesting one. An account of the relative progress of the different systems of working coal during (say) the last ten years would afford some valuable information, but such a review would require very careful and cautious handling. The circumstances under which a miner could get the greatest quantity of coal were when his thorough and continued attention and efforts could be applied to the department for which he was best suited. The skilled miner should, to obtain the best results, devote the whole of his time to skilled work. Any deviation to work which could be done by a less skilled workman was a loss of economy, yet this was an often broken rule. The newer wasted his time in loading, the loader wasted his time in trammimg, and the management lost by both. The advantages of a proper division of labour were not thoroughly and generally understood. People constantly engaged in some manual occupation often attained a skill which seemed marvellous to an observer, and constant practice seemed to endow them with a kind of intuition or almost instinct which seemed well nigh infallible. It was claimed for the longwall system that the principle of adjusting the right man to the right place and keeping him there could be adopted more readily than in any other system. Holders or undercutters were generally active young men who were very expert with the pick. The packing or timbering was done by stall men or contractors. Loaders were generally more remarkable for strength than skill, in fact the form in which many of the coals were got required considerable strength in the loaders to put the blocks entire into the trams, thus getting round coal, and saving the waste which would be entailed by breakage. Trammimg was principally performed by boys under the direction of a few men. All these separate operations, the first three of which were in some systems performed by the same man or men who relegated to men who performed the same work for years. The last operation, trammimg, had a very important influence on others. They were taken for granted that the haulage arrangements would permit of a supply of trams at different points where required for distribution. Nothing would tend more to elevate charters than an irregular supply of trams. If the demand on the stallmen fluctuated, the maximum capability could not be arrived at. At one time getters and loaders were wasting time in waiting for trams, and at another coals could not be obtained from the working places. Such arrangements as would ensure efficient and regular supply of trams to each stall were most economical. If this rule were followed, in a short time the maximum producing power of each stall would be ascertained, and in this position the "charter" for getting reached its maximum, and would then be ruled by market influences only. Several tables showing the prices paid for hauling, and the comparative getting facility of different coal seams, were then read, and these showed that the tonnage prices and the average get per man produced nearly the same wages in the different mines, although the quantity a man was able to get varied considerably; but the reader observed that it would be utterly impossible to give a scale of cost that would even approximately apply to the generality of mines in working. It might be safely said that a man working in a face of coal was capable of producing—say, as a rule—twice as much as a man working in a straight place; and, in addition to this, his cost would be in a more saleable condition. The item of yardage in pillar and stall work was very considerable, and against this had to be set the cost of gate roads in the longwall system. Many "sorts" of coal were made at most of the Midland collieries, and it was a question whether fewer sorts would not be more economical, for in some cases although there was a distinction between some of the qualities, it was almost a distinction without a difference. In conclusion, Mr. Grimshaw observed that no attempt had been made in the paper to bring forward anything that was absolutely new, but simply to lay before the members of the Society a few facts which might probably lead to useful discussion.

The CHAIRMAN observed that he had listened with great pleasure to the paper, but, perhaps, it would be better if the discussion were adjourned until the whole paper had been printed. This was assented to, and the usual vote of thanks passed to Messrs. Grimshaw and Phillips.

NEW DETACHING HOOK FOR COLLIERIES.

Mr. GEO. H. HOLLINGWORTH read a short paper descriptive of Booth and Suddon's new detaching hook for collieries. He said the subject of detaching hooks was at the present time occupying much attention amongst mine managers, partly because of the prominence given to the subject by a recent fearful accident, and partly because of the interest taken in the subject by Mr. Cross, the late Home Secretary, and the circulars sent out in consequence by the Inspectors of Mines, but he thought mainly because of the existence generally of a feeling amongst colliery managers that some such safeguard should be adopted. The detaching hook, which had recently been patented by Messrs. Isala Booth and James Sudden, was quite different in principle to any other hook at present in use, and although very ingenious was quite simple. There was no spring or contrivance liable to get out of order, and to secure lightness and strength it was made of cast-steel. During the act of detachment three copper pins, which served to keep the studs in position, must be sheared, but the pins were placed one in advance of the other, and the shearing action upon each pin was extended over a height of six times the diameter of the pins, the action being similar to that of a cropping machine, so that the shearing was not perceptible, there being practically no strain. Another important feature was that the hook made what was termed a partial overwind impossible, because if the engine were stopped, and reversed before the box came properly into position for detachment the studs were forced to return to their former working position as the box was lowered through the suspension beam by an attachment action the converse of detachment. When the cage has been detached by an overwind the connection of the rope to the cage and the resumption of winding need not occupy more than five minutes. The weight of the hook, the ultimate strength of which was 60 tons, and working load 5 tons, was 38 lbs. The hook was not adapted for pits working without guides, or with round ropes, as it was necessary that the box should enter square into the suspension orifice. Being only a recent introduction only a few of these hooks had yet been made, but one had been up to fully working at the Oak Colliery for more than three months, and on being tried by an intentioned overwind succeeded perfectly, experiments having been shown with the hook.

Mr. J. AITKEN, who had taken the chair, said there was no doubt that a thoroughly good detaching hook would be the means of saving many lives and much property at collieries. This was not a matter which he understood much about himself, but he thought the hook which had been described was not quite so simple as he could wish.

Mr. WOODWARD said it appeared to be a very clever mechanical contrivance, and there was only one point to which he should object, and that was with regard to the swivel, which was always a source of danger. If kept in good order he thought the hook ought to act well.

Mr. J. REED thought the studs might be liable to rust tight and break off; those kinds of hooks ought to be so arranged that they could not get out of order.

Mr. T. S. MARTIN, Assistant Inspector of Mines, said several kinds of detaching hooks had been invented of late years, many of them similar in principle, but the present one seemed to be quite different in some points. They were all more or less dependent upon a pin, and like everything else they required attention, but with the ordinary attention that was given at the collieries to all kinds of machinery he did not see any reason why the pin itself should be cause of accident. He was informed that at collieries where detaching hooks were in use they had in case of overwinds been found to act successfully, and had saved a great deal of time, and in some instances, no doubt, lives. There was no instance he knew of in which a detaching hook had been the cause of an accident. In that district, he might add, that was a result partly of the circulars which had been sent out there were now 200 detaching hooks in use.

Mr. HOLLINGWORTH, in replying to the discussion, said the swivel was not an essential part of the hook, and he did not think the hook was liable to get out of order, or to set fast.

COAL MEASURES IN THE SADDLEWORTH DISTRICT.

Mr. W. M. WATTS read a paper, illustrated by sections, giving an account of the geological strata passed through in a tunnel for water-works purposes at Saddleworth. After giving a description of the modes of sinking, driving, and ventilating, the reader observed, with regard to ventilation, that if it was to be effective in a tunnel more than 200 yards away from the shaft the air pipe must be made to give out jets of air at intervals of about 6 yards, as he considered the present system of sending all the air to the face to be faulty, because when the current was very strong it had a tendency to blow out the lights, and starve the men, the result of which was that the fans had to be slackened in speed, and the ventilation as a consequence suffered. Proceeding to a description of the strata passed through, Mr. Watts observed that they were much disturbed from their natural position, and occasionally the dip was found reversed. In the strata three thin seams of coal were met with; in fact, coal was found in five places, including the sinking of the shafts, but it was probable that only two seams existed, both of which were of inferior quality, burned with a dull red, and were very sulphurous. Some of the coal nearer Marsh bottom did not appear to have the usual well-defined floor clay, and it was probable

that if it existed it was rotten, owing to its proximity to the surface, and being acted upon by the surface percolation. The next seam was about 120 yards from the first shaft, in the direction of Marsh bottom entrance. The floor clay was present in this instance, but it was very soft and shaken, the overlying coal being all of a lustrous character, and much fractured, its component parts having apparently been considerably broken up since deposition and hardening. The remaining seam existed some 300 yards from Hanging Ties entrance, and dipped towards Prithorne Valley at an inclination of about one in six; it measured about 10 in. in thickness, but was of inferior quality, and was supported by a hard fire-clay floor. None of the coal seams passed through in the excavations possessed any industrial value, so that there was no prospect of their being worked in the future owing to the inferior quality of the coal and the thinness of the seams. He was unable to correlate these coal seams satisfactorily to himself, but if he might venture an opinion he would say that they belonged to "the first coal series" found immediately above the millstone grit, as described by Professor Hill in his "Memoirs of the Geological Survey."

The usual vote of thanks was passed to Mr. Hill for his paper, and the proceedings were brought to a close.

PREVENTING ACCIDENTS IN METALLIFEROUS MINES— NEW SPECIAL RULES.

An influential meeting, convened by Dr. Le Neve Foster, Her Majesty's Inspector of Mines for Cornwall and Devon, was held at the Royal Institution, Truro, on Tuesday. Amongst those present were Mr. C. Daubuz, Captains Nicholas (West Basset), S. H. James (Botallack), William Rich, Josiah Thomas, Bryant, James (Duchy Peru), William Skewes, James Bennett (North Levant), William Pascoe, Goldsworthy (Tavistock), John Mitchell (St. Aubyn United), and Rosewarne (Wheal Sisters), Messrs. R. Boyne (Bank St. Just), Dabb and Polkinghorne (Phoenix), Captains W. Teague and Maynard wrote to say they were unable to attend, but approved of the rules). Those present represented six thousand hands employed, and the total number employed in Cornwall last year was 12,000, so that half the mining population was represented at the meeting. Dr. Le Neve Foster explained that under the Coal Mines Regulation Act special rules having the effect of law are required to be established, and under the Metalliferous Mines Regulation Act there was power to adopt similar rules. As he believed that better discipline was necessary in metalliferous mines, and that some accidents which had come under his notice could have been prevented by such special rules, he communicated with the Home Secretary to that effect, and the consequence was that he was instructed to draw up a code of special rules, and having carefully gone into the matter, and talked it over with various agents of the representative mines in the county, he received the permission of the Home Secretary, before sending these rules up to him, to lay them before a meeting of mine agents in his district for the purpose of going through them, receiving any suggestions from them which they might make, and making any modifications, alterations, or omissions.

The Inspector then went through the proposed code of rules, to which certain alterations were suggested, and at the end of the meeting it was moved by Captain Skewes, and seconded by Captain Josiah Thomas, that the meeting recommend that the special rules proposed by Dr. Le Neve Foster, revised and approved of by that meeting, be printed, and a copy sent to every mine in Cornwall and Devonshire for further consideration. The object of the resolution, which was carried unanimously, was to give every mine agent in the inspector's district an opportunity of making any suggestions. The advantage of the rules to the manager will be that they define to a great extent the duties of his subordinates, and by so doing relieve him to a certain extent of his present responsibilities, which have not been defined. The under agents and the men themselves will be held responsible for certain duties, so as to avoid accidents. As the rules are for the safety of the men, every man must do his share towards that object. The Act itself does not define many acts which are necessary for the safety of the men, and hence the necessity for such rules defining these acts.

WINDING AND OVERWINDING.—The interesting paper read at the beginning of the year in the Mining and Mechanical School at Wigan, by Mr. C. M. Percy, lecturer on mechanical engineering, has been already fully noticed in the *Mining Journal*, and it is satisfactory to find that the third edition has now become necessary. Some few additions have been made in the shape of notes on safety-hooks, embodying the claims made by the several inventors, and a tabulated statement of the comparative advantages of vertical and horizontal winding-engines, both of which enhance the value of the book.

CIVIL AND MECHANICAL ENGINEERS' SOCIETY.—On Thursday the debate was resumed on the important paper on the Fracture of Cast-iron read at a recent meeting of the society by Mr. James Love, F.R.A.S., F.G.S. The chair was occupied by Mr. William C. Street, the President. Mr. Love supplemented the information given in his paper by some valuable observations, accompanied by experiments with the polariscope, showing the lines of equal stress, and specimens of cast-iron and steel under the microscope, showing different descriptions of fracture. A discussion took place, in which Mr. Harkness Twigg, M.I.C.E., Mr. Bancroft, Mr. Haughton, Mr. Valpy, M.I.C.E., and Mr. Rymer Jones took part. Various theories were advanced as to the curved line of fracture generally assumed, and the failure of pipes, columns, and other productions of cast-iron. The President said there was no doubt that many professional engineers knew much less about the nature of metals than they ought to. There was no doubt there was another metal which would enter largely into building construction—modern Bessemer or mild steel, which engineers and architects would have to deal with more than with cast-iron. A cordial vote of thanks was passed to Mr. Love. Mr. Rymer Jones exhibited to the members a very ingenious machine which he has recently invented for plotting a perfect section of the ground over which it is driven to a fixed scale. It is designed to lessen the cost of railway and other surveying.

MINING INSTITUTE OF SCOTLAND.—The first meeting of the third year of this Institute was held last week in Hamilton. Mr. R. B. Begg, M.E., presided. The accounts for last year showed a balance to the good, and the council of the Institute in their annual report remarked on the prosperous condition of the Institute, which, they said, is now firmly established. The number of members is 209 as compared with 46 at the close of the last year, and they anticipate a further increase. There had been twelve meetings during the year. In accordance with the decision at the beginning of the year, the papers read and the discussions thereon had been printed and circulated amongst the members, and had embraced the important and practical subjects of ventilation, modes of working, winding, coal-cutting by machinery, and signalling. A valuable contribution to the Transactions was a description by Prof. Forbes of the "damposcope," an instrument invented by him to detect and measure small quantities of fire-damp in the air of mines. The other papers comprised one on "Trade's Unions" and one on "Mining as pursued in the North of England." Two members had visited and reported on a mode of underground haulage by air locomotives at Newbottle Colliery, Durham, and their report formed a valuable addition to the Transactions. Office-bearers were appointed for the ensuing year, including Mr. Ralph Moore, Inspector of Mines, as president, and Mr. James Gilchrist, Earmock Colliery, as secretary.

BURNING LIQUID FUEL.—In burning liquid fuel for domestic and other purposes, Messrs. BOMBONNEL and EMONIN, of Paris, propose to provide a porous brick, which is placed in the stove and fed by means of a pipe with the combustible material. The combustible liquid penetrates into the brick by its gravity, assisted by the capillary attraction of the brick, and is lighted and burned at the surface of this brick. The flow of the liquid is regulated and interrupted by a cock suitably placed on a supply pipe. It is claimed that the apparatus is not attended by risk of explosion or of being accidentally set on fire, for the reason that the reservoir of the combustible liquid is separated from the part where the combustion takes place by a small pipe, which is in practice always at least a metre in length, and by the thickness of the brick itself, which is a bad conductor of heat, and the pores of which, being only capillary, do not allow the formation of any detonating mixture. The reservoir of combustible liquid may moreover be situated as far as desired from this brick or block, and the regulating cock permits all communication to be instantly intercepted. The apparatus may be used for the same purposes as and may replace gas stoves, and will be found

specially valuable in the localities or habitations not provided with illuminating gas.

SEWERS AND DRAINS FOR POPULOUS DISTRICTS.

The whole question of sewerage for towns has been ably and exhaustively discussed by Mr. Julius W. Adams, chief engineer of the Board of City Works, and consulting engineer to the Board of Health, Brooklyn, in a volume bearing the above title (New York: Van Nostrand, Murray-street; London: Trübner and Co., Ludgate Hill), and as the London main drainage system has been taken as the basis of the work, it will be quite as acceptable to the sanitary engineers of this country as to those of the United States. In 1857 Mr. Adams was charged with the preparation of plans for the sewerage of the City of Brooklyn, covering an area of 20 square miles, much of which was then suburban territory. At that date no gaugings had ever been made of the discharge of sewers, and the only principle recognised was to make the sewers large enough to admit a workman to clean them by the use of shovel and pick. In 1852 the General Board of Health under the Public Health Act made their first report to the British Parliament, and advocated very strongly the introduction of smaller pipes in lieu of the large brick and stone drains heretofore in use for house drainage. The tables appended to the report, however, suggested the use of pipes, which experience proved to be unquestionably too small, so that they became less and less recognised as a standard until some seven years since they were to some extent replaced by the suggestions of a private English engineer, whose views have in their turn been proved to be quite as erroneous in the other direction. The principle laid down in the Hydraulic Tables of Neville, which is, no doubt, the correct one, has been generally overlooked, and the value of Mr. Adams's book is much enhanced by the fact that it embodies the principles and practice of sewerage towns as illustrated in the working of the Brooklyn system, which is based upon the recognition of Neville's principle.

In devising a system of sewerage for a populous district there are, as Mr. Adams points out, several controlling circumstances to be taken into consideration. It would appear at first sight that the first thing to be considered would be the population of the locality. Were the sewers to be confined to the withdrawal of sewage proper from the vicinity of dwellings this would to a great extent be the case, but even then the extent of water supply would be a preponderating element in the calculation. If, for instance, the water supply were derived from wells on or near the premises, as in country villages, the amount of sewage would be materially reduced from what might be anticipated were the water for domestic use obtained by the simple act of turning a faucet, and whether the supply of water was intermittent or constant would exercise an important influence on the amount of consumption or waste from dwellings. The sewage from a dwelling differs by an insignificant amount in bulk from the water consumed or wasted. In fact, the water taken into a dwelling for all purposes is the measure of the sewage which leaves it; and a generous water supply, such as is found in most cities supplied by waterworks, would under proper management suffice to carry off all excrementitious, or human refuse. But with the sewers confined to this purpose an additional system of drains on a grander scale is called for to remove the storm water which would otherwise flood the premises, and prove the cause not only of present injury and discomfort to the inhabitants, but subsequently objectionable as well on sanitary grounds.

The subject is systematically divided, so that the several points demanding attention may be dealt with separately. The question of area and physical outlines and controlling features of the district to be drained, its geological character, and the depth to which it may be desirable that drainage should extend are first considered; then that of the rainfall in the district, with consideration of the maximum fall of rain in a given interval of time, and the proportion of such storm water as it is proposed to carry off by the sewers; next the character and extent of the water supply; and, lastly, the final disposal of the sewage. The volume is amply illustrated throughout, and will prove an invaluable work of reference to sanitary engineers wherever the English language is understood.

THE WILD DUCK, OR SPORTSMAN'S ARMS.

"Look here, sose's," says Jan Temby, "poor Old Tom is coming; and very soon he came into the room. "We are all very glad to see thee again, Old Tom," says Uncle Henny, "and thee art jest in the nick of time for a good dinner, which I'm sure will do thee, poor old fellow, a world of good." "Well, comrades, I'm fine and glad to be here once more," says Old Tom, "and after the long pull I've had a good dinner will make me stiff again, and put new life in me." "Why, our mittens," says Jan Jewill, "have been nothing without thee, Old Tom, and only for the boy Jacky reading the *Mining Journal* for us we should be in the dark, and he was reading in the Journal that some furriner had a plan of dressing ore dry by grinding it to powder, and then blowing the waste out of it." "That's my plan," says Old Tom, "and I told ee all about 'two years ago. I told ee at the time that all the tens of thousands of pounds worth of tin going down the Red River could be saved, but of coose nobody what hark to a poor old fool like I." "Lev us hear again," says Jan Temby, "what thy plan was, Old Tom, but wash down thy dinner first with this prime ale, and clear thy throat, old fellow, before thee'st begin." "Well," says Old Tom, "my plan was like this here: To break all the tinstuff to a certain size, then crush it dry; and divisions to be made under the sieves, the length of the sieve, and then with a air-blast blow the waste into another part of the house, and the tin, being heavier than the waste, would be left clean on the floor; the roughs to be carried up by raff wheels, and crushed over again. Now, that's my plan, and when it is used no more tin will go down Red River, but so long as the old plan is used all the great larned institutions and mining schools put together will never be able to stop it; but, as I said before, if my plan had come from some big whig of the institutions it would be used long ago, and would do a thousand times more good than all their grand talk, which always end in nothing." "I don't know," says Uncle Henny, "but I think thy plan, Old Tom, is a capital one, and ought to be tried at once, for we are sure by it that no tin could be lost, and the trial would be of more importance to the miners than all that was ever done, or likely to be done for a very long time to come, by the mining schools, &c., for up to this time I've never seen one bit of good any of them have done. Nicky Huck 60 years ago could set a shovel or pit so well every bit as the most scientific men of the mining schools. Our old capns could dial to hair's breadth, and didn't want land surveyors to do their work. Our old pitmen and timbermen 60 or 70 years ago did their work in first-rate style, and where is there one of the scientific young men that would know how to change a bucket or clack, or the way to go about it. I tell ee, men, the object of all this science is to tell young men how to run before they are able to crawl, and wear their best clothes every day. Then, again, the Government Inspectors tell us when a man is killed, but I've never heard they could tell how to prevent accidents. Then there is the shameful humbug of making a poor man keep his boy at school when he ought to be getting his living. Why such tomfoolery will make scientific paupers, and nothing else." "Bravo, Uncle Henny," says Jemmy Dowa, "but what do ee think, men, about selling tin by ticketing?" "I think," says Jan Temby, "it is a farce, and better leave it as is, and it don't look fitty for one man to be seller, buyer, manager, and adventurer. The only cure is for the mines to smelt their own tin." "I was going through Troon the other evening," says Jemmy Dowa, "and went in to have a pint of ale, and while there all the discoose was about working Old Polgine." "I can mind Troon," says Old Tom, "when there was only four houses in the place, with green gutters before two of them, and turf ricks before the rest." "It's a fine town now," says Jan Temby, "and when I was a youngster I worked in Polgine, and I'm sure the western end—from Freeman's shaft west—is a rich mine for tin and copper." "I worked there too," says Old Tom, "and I'm sure if they sink the old engine and Champion's shafts they'll have one of the richest mines in the district. A cross-cut north of 12 or 14 fms. from Champion's shaft would cut a grand tin lode; this could be done now at the adit level." Cousin Will now came in with a fine jug of punch, and said—"I am very glad to see you all

again, and hope our meetings will long continue." "I second the motion," says Jan Jewill, "and as this is the first time Old Tom has been here for a long time I propose that we have another jug of punch." This was agreed to, and after a long pleasant chat on various subjects, some of which will probably be related, the mitten, like everything else, came to an end.—*From Cousin Jack's Unpublished MSS.*

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####

COAL MINES REGULATION ACT, 1872.

EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.
DISTRICT UNDER THE CHARGE OF THOMAS WYNNE, Esq.,
H.M. INSPECTOR OF MINES.

PERSONS desirous of being EXAMINED in this District for MANAGERS' CERTIFICATES OF COMPETENCY, under the above named Act, should at once COMMUNICATE with the Secretary to the Board of the above-mentioned District at the following address:—Joseph Knight, Secretary to the Board of Examiners for the Mining District of North Staffordshire, &c., Newcastle-under-Lyme, Staffordshire.

By order of the Board,

JOSEPH KNIGHT, Secretary.

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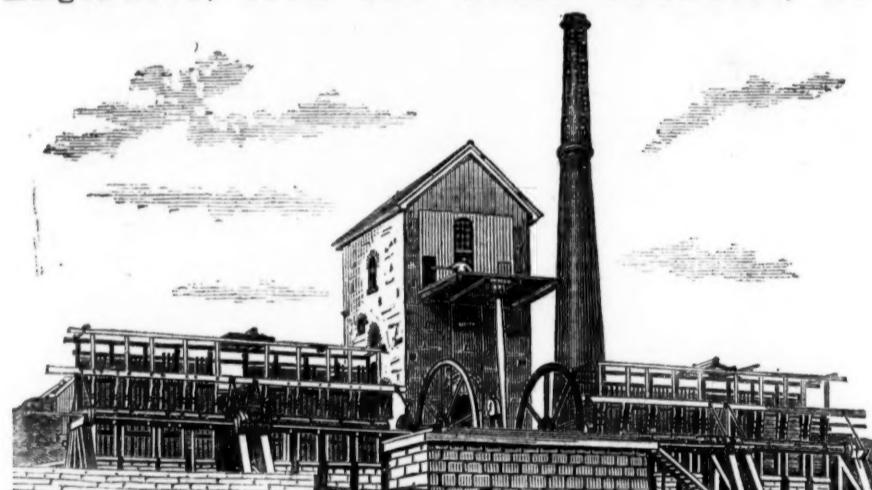
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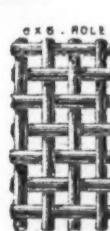
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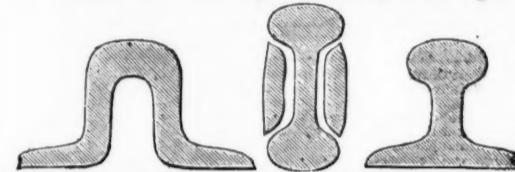
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5400 Green Hinch, t, Durham*	0 8	0 ..	7 1/2 ..	7 1/2	..	2 10 .. 0 5 .. Mar. 1880
20000 Grogwinion, t, Cardigan*	2 0	0 ..	3 1/2 ..	2 1/2	3 1/2 ..	0 14 10 .. 0 1 10 .. Aug. 1878
2800 Isle of Man, t, Isle of Man*	25 0	0 ..	— ..	85 2 ..	0 10 ..	0 Feb. 1879
20000 Lerdhills,* t, Lanarkshire	6 0	0 ..	3 1/2 ..	3 3/2 ..	0 15 ..	0 3 .. Mar. 1878
400 Lisburne, t, Cardiganshire	18 15	0 ..	37 1/2 ..	35 37/4 ..	500 ..	10 .. 0 1 .. Mar. 1880
10000 Mellanear, c, Hawley*	2 6	0 ..	5 1/2 ..	5 1/2 ..	0 16 ..	0 2 .. Apr. 1880
9000 Minera Mining Co., t, Wrexham*	5 0	0 ..	10 1/2 ..	9 1/2	10 ..	68 9 .. 0 4 .. Feb. 1880
20000 Mint Co. of Ireland, c, t, c*	7 0	0 ..	3 1/2 ..	2 1/2	3/4 ..	24 0 .. 0 2 .. Jan. 1880
5328 North Busy, t, c, Chacewater	0 5	8 ..	— ..	1 1/2 ..	1 1/2 ..	0 3 0 .. 0 10 .. Oct. 1878
11829 North Hendre, t, Wales	2 10	0 ..	— ..	3 10 ..	0 7 ..	6 .. Jan. 1880
883 Ditto	1 0	0 ..	— ..	0 7 ..	0 3 .. Mar. 1880	1820 D'Eresby Consols, t, b, Carnarvon .. 10 0 .. 0 ..
6000 Pennant, t, bar, North Wales*	5 0	0 ..	3 ..	3 3/2 ..	0 10 ..	0 5 .. Mar. 1878
12000 Phoenix United, t, c, Link	5 10	0 ..	5 1/2 ..	5 1/2 ..	0 2 ..	6 .. Mar. 1880
18000 Pr. Patrick,* s-l, (als. 12000pf. 10 p.c.)	1 0	0 ..	— ..	0 18 ..	0 6 ..	1 .. Dec. 1879
10000 Red Rock, t, Cardigan	2 0	0 ..	2 ..	1 1/2 ..	0 4 ..	0 2 .. Jan. 1878
12000 Roman Gravels, t, Salop*	7 10	0 ..	11 1/2 ..	8 1 ..	0 5 ..	0 5 .. Apr. 1880
4000 Rhylalun,* t, Wales	10 0	0 ..	— ..	0 5 ..	0 5 ..	0 5 .. Feb. 1880
512 South Cadron, c, St. Cleer*	1 5	0 ..	140 ..	125 135 ..	748 0 ..	0 2 .. 0 4 .. Apr. 1880
6123 South Condurrow, t, c, Camborne*	6 5	6 ..	11 1/2 ..	11 1/2 ..	7 2 ..	0 10 .. 0 10 .. Apr. 1880
9000 South Darren, t, Cardigan*	1 10	0 ..	3 1/2 ..	3 1/2 ..	0 4 ..	0 2 .. Apr. 1880
4500 South Wheal Frances, t, Illogan†	7 12	4 ..	18 ..	17 1/2 ..	18 ..	40 5 .. 6 .. 16 .. Mar. 1880
12000 Tankerville, t, Salop*	6 0	0 ..	5 ..	4 1/2 ..	4 17 ..	8 .. 0 5 .. Jan. 1877
6000 Tincroft, t, c, Pool, Illogan†	11 10	0 ..	13 ..	18 1/2 ..	50 8 ..	6 .. 0 5 .. May. 1877
15000 Van, t, Llandilo	4 5	0 ..	19 1/2 ..	18 19 ..	24 10 ..	6 .. 0 10 .. Jan. 1880
3000 West Chiverton, t, Perranzabuloe*	19 15	0 ..	1 1/2 ..	1 1/2 ..	55 10 ..	0 10 .. Feb. 1878
512 West Tolgas, c, Redruth	95 10	0 ..	60 ..	50 55 ..	33 0 ..	1 0 .. Jan. 1872
12000 Wheat Seton, c, Camborne*	20 10	0 ..	25 ..	22 1/2 ..	223 0 ..	0 7 .. 8 .. Apr. 1878
1024 Wheat Eliza Consols, t, St. Austell..	2 4	0 ..	4 1/2 ..	4 1/2 ..	0 3 ..	0 3 .. Mar. 1880
4295 Wheat Kella, t, St. Agnes	5 4	6 ..	5 1/2 ..	5 1/2 ..	12 9 ..	6 .. 0 10 .. Jan. 1880
3000 Wheal Peevor, t, Redruth	7 11	0 ..	28 ..	28 1/2 ..	29 1/2 ..	4 1 .. 0 12 .. 6 .. Feb. 1880

FOREIGN DIVIDEND MINES.

	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
Shares.						
35500 Alamillos, t, Spain*	2 0	0 ..	1 1/2 ..	1 1/2 ..	0 2 ..	0 1 .. Apr. 1880
130000 Almada and Tivito Consol., s†	1 ..	0 ..	5/4 ..	5/4 ..	0 6 ..	0 1 .. May. 1878
20000 Australian, c, South Australia?	7 7	6 ..	1 1/2 ..	1 1/2 ..	1 3 ..	0 2 .. Aug. 1879
20000 Cape Copper Mining,* t, South Africa	7 0	0 ..	39 ..	37 39 ..	37 7 ..	0 17 .. Mar. 1880
35000 Cesena Sulph. Co., Romagna, Italy	10 0	0 ..	— ..	1 1 ..	0 1 ..	0 1 .. Aug. 1879
10000 Cioparo, c, Chile* (420 shares)	17 0	0 ..	10 1/2 ..	9 1/2 ..	10 5 ..	0 3 .. Mar. 1877
23500 Eberhardt and Aurora, s, Nevada*	10 0	0 ..	4 1/2 ..	4 1/2 ..	1 8 ..	0 3 .. Dec. 1877
70000 English & Australian,* t, S. Aust..	2 10	0 ..	1 1/2 ..	1 1/2 ..	9 0 ..	0 1 .. Mar. 1880
25000 Fortuna, t, Spain*	2 0	0 ..	5 1/2 ..	4 1/2 ..	4 17 ..	8 .. 0 5 .. Jan. 1877
55000 Frontini, t, Bolivia, g, New Gran.*	2 0	0 ..	3 1/2 ..	3 1/2 ..	50 8 ..	6 .. 0 5 .. May. 1877
15000 Linares, t, Spain*	3 0	0 ..	6 ..	5 1/2 ..	50 6 ..	0 1 .. Feb. 1879
15000 Linares, t, Spain*	3 0	0 ..	6 ..	5 1/2 ..	50 6 ..	0 1 .. Feb. 1879
10000 Pontigibaud, s-l, France†	20 0	0 ..	22 ..	27 17 ..	60 ..	0 10 .. Dec. 1879
100000 Port Phillip, g, Clunes† (£2 shares)	1 0	0 ..	5/4 ..	5/4 ..	1 13 ..	0 4 .. 1 .. Mar. 1880
54000 Richmond Consol., s, Nevada*	5 0	0 ..	16 ..	16 1/2 ..	16 1/2 ..	8 12 .. 0 7 .. Apr. 1880
40000 Santa Barbara, g, Brazil	0 10	0 ..	2 1/2 ..	2 1/2 ..	0 10 ..	0 2 .. Apr. 1880
120000 Scottish-Australian Mining Co.*	1 0	0 ..	2 1/2 ..	2 1/2 ..	10 10 ..	0 1 .. Nov. 1879
800000 St. John del Rey† (£5 Stock and multiples dealt in) ..	245 255 ..	12 1/2 ..	12 1/2 ..	p.c. for half-year, June 1879	1879	1879
20000 Tolima, g, s, Colombia	5 0	0 ..	— ..	1 3 ..	0 .. 0 ..	0 4 .. Mar. 1880
25000 Victoria* (London), g, Australia	1 0	0 ..	— ..	0 13 ..	1/2 .. 0 0 ..	0 7 .. June 1879
2100 W. Prussian (5500 pf. sh. £10 pd.)	10 0	0 ..	10 1/2 ..	10 10 1/2 ..	2 10 ..	0 0 .. 0 8 .. Apr. 1880

\$ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

	Shares.	Paid.	Last wk.	Clos. pr.	Paid.	Last wk.	Clos. pr.
Shares.							
25800 Aberllyn, * t, bl, Carnarvon	1	0 ..	—	1 1/2 ..	1 1/2 ..	0 ..	1 1/2 ..
12000 Ashton, t, Carnarvonshire*	5	0 ..	1 ..	5 1/2 ..	5 1/2 ..	0 ..	5 1/2 ..
11583 Bedford Unit,* t, Taxis (£1 lab.)	0 4	0 ..	1 ..	3 1/2 ..	3 1/2 ..	0 ..	3 1/2 ..
30000 Bettws-y-Coed,* t (20000 sh. issued)	1	0 ..	— ..	— ..	— ..	0 ..	— ..
8000 Blaen Caefan,* t, Cardigan	3	0 ..	— ..	— ..	— ..	0 ..	— ..
3939 Blue Hills, t, c, St. Agnes	4 6	6 ..	4 ..	3 1/2 ..	3 1/2 ..	0 ..	3 1/2 ..
30000 Bodidris,* t, bl, Denbighshire	1	0 ..	— ..	1 1/2 ..	1 1/2 ..	0 ..	1 1/2 ..
20000 Botallack, t, c, St. Just	125	5 ..	90 ..	80 90 ..	80 90 ..	0 ..	80 90 ..
British, c-d, Wrexham	2	0 ..	— ..	— ..	— ..	0 ..	— ..
Brownsgreen, t, St. Neot	0 10	0 ..	— ..	— ..	— ..	0 ..	— ..
Bwlch United,* t (£1 sh.) Cardigan	0 12	6 ..	3 1/2 ..	3 1/2 ..	3 1/2 ..	0 ..	3 1/2 ..
50000 Cambrian,* s-l, c, Cardiganshire	2	0 ..	2 ..	2 1/2 ..	2 1/2 ..	0 ..	2 1/2 ..
60000 Carn Camborne, t, c, Camborne	0 2	6 ..	2 1/2 ..	2 1/2 ..	2 1/2 ..	0 ..	2 1/2 ..
20000 Carnarvon,* c, Carnarvonshire	1	0 ..	— ..	1 1/2 ..	1 1/2 ..	0 ..	1 1/2 ..
10000 Foxdale, t, I. of Man* (42 sh.)	1 5	0 ..	— ..	— ..	— ..	0 ..	— ..
25000 Coed Mawr Pool,* t, Carnarvon	2	0 ..	— ..	— ..	— ..	0 ..	— ..
7500 Combartin, * t, North Devon	0 8	6 ..	— ..	— ..	— ..	0 ..	— ..
8000 Cook's Kitchen, t, Illogan†	28 4	9 ..	7 1/2 ..	7 1/2 ..	7 1/2 ..	0 ..	7 1/2 ..
10000 Cornwall Great Consols, Callington	4	0 ..	— ..	— ..	— ..	0 ..	— ..
8000 Crook Burn,* t, Cumberland	0 5	0					